Spiral

2018

THE FUTURE IS FLUID

THE RUBIN

Maira Kalman draws on her past

David Eagleman on living in the moment

Buckle up: Time traveling with James Gleick

Is *Westworld* Buddhist?

ACKNOWLEDGMENTS

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ALL SIGNS POINT TO THE FUTURE

Detail from a manuscript edition of the *White Beryl* by Sangye Gyatso, written and illustrated by Sonam Paljor; Central Tibet; mid-18th century; pigments on cloth; Rubin Museum of Art; C2015.7

QUESTIONS ABOUT THE future cross eras and cultures, as we're all curious, fascinated—and slightly overwhelmed—about what awaits us.

The Indian-born Buddhist master Padmasambhava, known to Tibetans as the Second Buddha, was believed to have lived in the eighth century. He had the ability to see all of time, and he foresaw moments when his teachings would need to be renewed and reintroduced. Projecting his teachings into the future, he left a cache of hidden teachings (*terma*) to be discovered and unlocked by future revealers (*terton*) with whom he had a karmic connection.

Not all of us can be Buddhist masters, so we rely on more mundane methods to peer into tomorrow. Written a thousand years after Padmasambhava secreted his knowledge, the *White Beryl*, a comprehensive Tibetan astrological treatise from the eighteenth century, was compiled to examine the future through divination. A copy of the *White Beryl* resides in the Rubin Museum's collection, and its richly illustrated calculation charts on birth, marriage, obstacle years, ill-health, and death offer predictions while proffering ways to mitigate negative outcomes. It puts the future in your hands.

In this issue of *Spiral*, we'll explore themes of the future and time from the perspectives of artists, neuroscientists, Buddhist practitioners, writers, and illustrators. We'll look at analogue and virtual reality, try to understand why people in various circumstances may perceive time differently, and learn how Padmasambhava is surprisingly relevant to popular culture today. James Gleick takes us on an out-of-this-world journey through the history of time travel in film and literature, while French writer and Buddhist monk Matthieu Ricard writes passionately about advice he received in the past and how it relates to our shared survival. And though it may seem far-fetched, Alexandra Horowitz, director of the Dog Cognition Lab at Barnard, describes the uncanny way our canine friends tell time. Throughout it all, neuroscientist and author David Eagleman—the Museum's first Future Fellow—guides us through ideas of time and the overlapping concepts of past, present, and future

Can we create the future by harnessing the power of the present moment? How do the timeless ideas expressed in Himalayan art help us understand and better cope with our contemporary predicaments and future uncertainties? A full year of programming at the Rubin Museum, coupled with *Spiral*, will enable us to explore these ideas together. Indeed, the future is in your hands.

Jorrit Britschgi
Executive Director
Rubin Museum of Art

Let us know what you think. Send your thoughts, comments, or questions about *Spiral* and the nature of time to conversation@rubinmuseum.org, and you'll be entered to win a one-year membership to the Rubin Museum of Art.

The conversation continues: Post your favorite quotes from *Spiral* using the hashtag #TheFutureIsFluid.

Spiral

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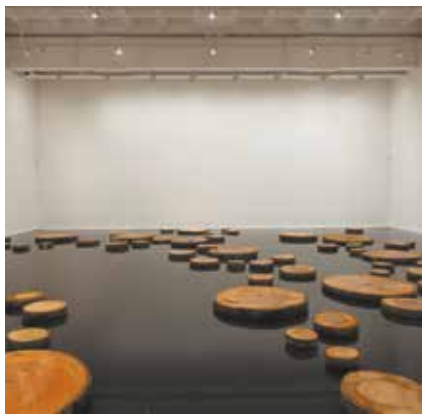

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Illustration by Wes Duvall

WESTWORLD AND HIDDEN TREASURES

How the teachings of a legendary Buddhist master resonate in popular culture today

BY *Elena Pakhoutova*

AS I WAS WORKING on the exhibition *The Second Buddha: Master of Time* and thinking about how the past shapes our present and future, I was captivated by *Westworld*, the HBO television series. I was struck by how the ideas explored in *Westworld* resonate with big existential questions addressed in Buddhism, including the interconnected nature of the past, present, and future, a core concept of the *The Second Buddha*.

The exhibition focuses on the legendary Indian Buddhist master Padmasambhava, an important figure in Tibetan Buddhist culture. He is known as the Second Buddha, as he is thought to have introduced Buddhist teachings to Tibet in the eighth century.

Padmasambhava is also credited with concealing his teachings as treasures, called *terma* in Tibetan, throughout the Himalayas in caves, within solid rock, under pillars in temples, in statues, and even in the minds of his disciples. He intended for his reborn disciples to discover these treasure teachings in the future when they were most needed and the circumstances for their discovery were ripe. These teachings, like a source code, permeate the Himalayan landscape. They can be retrieved only by those who have access to the "source code" through a prior karmic connection with the source of the teachings—Padmasambhava—and the teachings themselves. The so-called treasure revealers then master these teachings and practices and share them with others.

I set out to conceptualize the rich but complicated narratives about Padmasambhava from traditional Tibetan Buddhist culture and present them to our twenty-first-century visitors. I wanted to make connections to the stories from the twelfth-century literature and the visual materials dating to the thirteenth through nineteenth centuries relatable to those unfamiliar with them. With these thoughts in mind, I watched the narratives of *Westworld* unfold and saw that the notion of existence presented in the series is comparable to the Buddhist perspective on existence and reality. One important connecting point is the Buddhist belief that a human life is part of a much greater continuity of lives that includes numerous past and future lives, not just the current one.

Westworld is set in a Wild West–themed high-tech fantasy world that perfectly approximates reality, where wealthy guests go to engage their alternate personalities as players and interact with the android hosts who are part of this created world. (Warning to those who haven't yet seen the show's first season: spoilers lie ahead.) The main character, Dolores, is an android, though she believes she is human. Although this point is essential to the show's premise, I am more interested in the fact that Dolores had a previous existence as a different version of herself, which she is trying to remember. Dolores struggles to remember her past, as she is programmed to experience her life in the park over and over again, forgetting each time it begins anew. This cycle is similar to living out your karma until this karma is exhausted and something new develops, or a new state of consciousness begins. In her monologues, Dolores often talks about a path, saying that everyone has one. This notion is in sync with the Buddhist view of human existence.

Dolores's journey serves as an allegory for a person searching for a former identity to understand who she is now and what she is meant to do. Moments of recollection, like flashes of memory—one might call them visions—aid her progress in remembering and learning who she is. The question of identity is her driving force, and only by remembering her past life can she understand herself and move forward.

Over the course of the show, compelled by external and internal circumstances and guided by visions, Dolores searches for a maze. By discovering it, she learns who she once was. This story powerfully connects to the stories of Padmasambhava's reborn disciples searching for his hidden treasure teachings. Like Dolores, the treasure revealers have visions; often these are glimpses of their previous lives as Padmasambhava's disciples, and they learn they are meant to find *terma*, the hidden treasure teachings. External and internal circumstances shape their lives. They have to accept the imperative to search for *terma* and embark on journeys of self-discovery and *terma* revelation.

Dolores's visions eventually bring her to a place she remembers, where she finds and unearths the maze. It turns out to be a simple child's toy, a small handheld maze with a rolling pinball. When she holds it, the object unlocks her memory, and she remembers her previous existence and past experiences. In that moment, everything changes. Her revelation alters her present and ultimately the future of this world. The maze is the key that unlocks her mind, similar to a found *terma* that unlocks the past life experiences of a treasure revealer, who then makes the discovered teachings accessible to current and subsequent generations, affecting both the present and the future.

This structure for a quest—remembering the past to change the future—is a known plot device in science fiction literature and movies. For example, *Paycheck*, the 2003 film based on Philip K. Dick's short story, draws on this concept. The protagonist, Michael Jennings, is hired to build a machine that can predict the future, but he must work in total isolation and commit to erasing his own memory once the project is complete to protect the technology. Just before finishing his work he glimpses the terrible outcome his employers will bring about by using this machine. Knowing what the future holds, Jennings sets out to prevent this catastrophe. He sends himself an assortment of seemingly random items to be delivered after his memory is wiped out. The plot is a bit more intricate, but these simple items—a paperclip, gum, a fortune cookie, and others—unlock his memories and guide him to use each object at the right moment. He avoids a series of fatal encounters, gains a new, better life for himself, and changes the future for everyone. Like the treasure revealers who discover *terma* at the times they are needed, remembering his past changes the present and enables a different future.

These two examples from contemporary visual culture and the stories of Padmasambhava and his treasure revealers from Tibetan culture illustrate the notions that the past, present, and future are interconnected and we can influence the future, demonstrating that these ideas are part of our shared thinking and perspectives on existence. While the past gives us a sense of perspective that helps situate us in the now, everything we do is really about the future.

Elena Pakhoutova is a curator of Himalayan art at the Rubin Museum of Art and holds a PhD in Asian art history from the University of Virginia. She has curated several exhibitions at the Rubin, including *The All-Knowing Buddha: A Secret Guide,* with Karl Debreczeny; *Collecting Paradise: Buddhist Art of Kashmir and Its Legacies; Nepalese Seasons: Rain and Ritual,* with Gautama Vajracharya; and *The Second Buddha: Master of Time.*

MENTAL NOTE

Neuroscience Meets Westworld

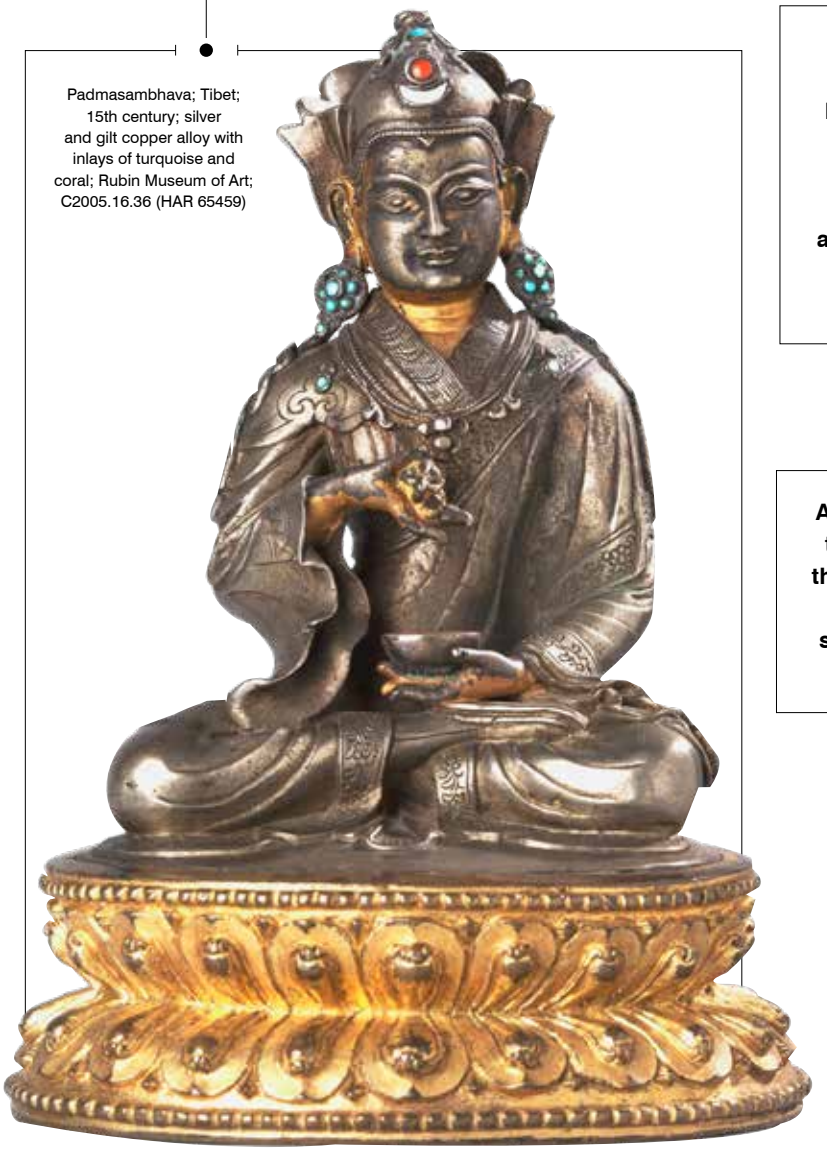
by David Eagleman

I am a scientific advisor to the HBO television series *Westworld*, and I am interested in how memory relates to consciousness. In the show, the android hosts are reset every day and don't have any memory of it, as though life and time begin again. We don't know if the same thing is happening to us. Two seconds ago the whole cosmos might have frozen for ten thousand years and then restarted, and we presumably wouldn't know about it. Your whole life might have been rebooted last night. This is what happens to the hosts in *Westworld*, and it might be happening to us. We have no way of knowing, because all we ever experience is "I feel like this has been going on…" If you are reset with no memory, then as far as you are concerned, you are experiencing everything for the first time.

An ongoing question in philosophy and neuroscience is whether we are a simulation. Descartes asked a version of this question when he wondered how he would know if he were a brain in a vat, with scientists stimulating it in such a way as to make him believe he is eating this, touching that, and having "real" experiences. Unfortunately, we have no way of answering this question. In Silicon Valley, where I live, we talk about this issue a lot: how would we know if we were living in a sophisticated computer simulation, the product of a civilization that is a million years more advanced? Perhaps they are simulating us to see what happens next, or maybe they are running ten thousand different simulations to see what we would do in different circumstances. As wacky of an idea as this sounds, it is part of what is possible, and it is something we need to consider when we try to understand our reality.

According to the *terma*, or treasure tradition, Padmasambhava was born on a lotus in Dhanakosha Lake as an emanation of the Buddha Amitabha.

He is believed to have helped the king of Tibet convert his people to Buddhism in the late eighth century.

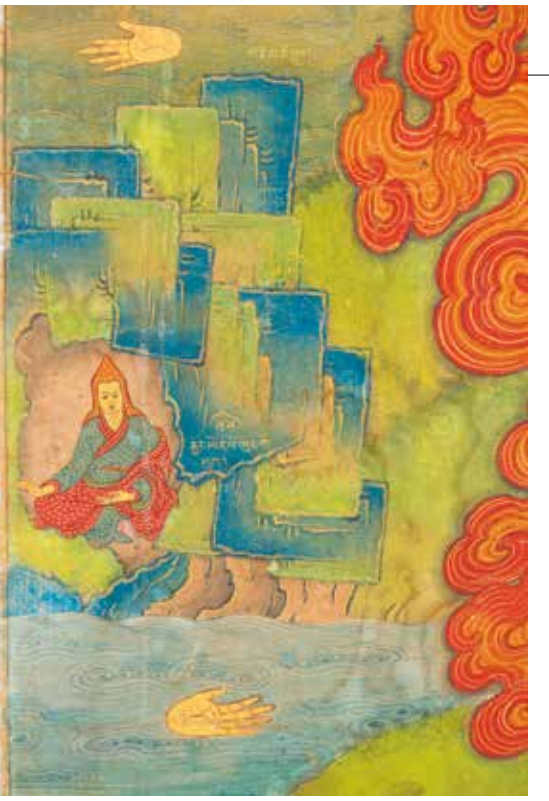


Padmasambhava; Tibet; 15th century; silver and gilt copper alloy with inlays of turquoise and coral; Rubin Museum of Art; C2005.16.36 (HAR 65459)

In addition to converting the Tibetan people, Padmasambhava helped subdue local gods and prevented spirits of the land, mountains, and lakes from interfering with the spread of Buddhist culture.

A tantric wizard and master of ritual magic, he is thought to have perceived time as it really exists, seeing the past, present, and future.

Tibetans call him the Second Buddha, as they consider him second only to Buddha Shakyamuni, the founding teacher of Buddhism, who lived many centuries earlier in ancient India.



Detail from Dorje Drolo, One of Eight Manifestations of Padmasambhava; Central Tibet; 18th century; pigments on cloth; Rubin Museum of Art; Gift of the Shelley & Donald Rubin Foundation; F1996.31.14 (HAR 528)

Padmasambhava is credited with leaving countless footprints and handprints throughout the Himalayas, whether seared into stone or fixed on the surface of water.

WIZARD. TANTRIC MASTER. GURU.

Padmasambhava helped bring Buddhism to Tibet, secreted his teachings for future generations, and subdued demons and volatile gods that got in his way.

In some legends Padmasambhava melted ice by shooting fire from his hand.

In others, Padmasambhava emerged unscathed on a lotus after being burned at the stake.

Padmasambhava is thought to have played a key role in the construction of Samye, the first Tibetan monastery.

Purba with Three Faces of Vajrakila Buddha; Tibet; 17th century; ebony, ivory with pigments; Rubin Museum of Art; Gift of Carlton and Holly Rochell in honor of Donald Rubin; C2005.3.1 (HAR 65390)

Padmasambhava and Scenes from His Life Story; Kham Province, eastern Tibet; 18th–19th century; pigments on cloth; Rubin Museum of Art; C2003.49.11 (HAR 65273)

Able to foresee periods of strife, he projected his teachings (*terma*) into the future by hiding them for treasure revealers (*terton*) to discover, ensuring the continued flourishing of his ideas and practices.

Having a karmic connection to Padmasambhava allows the *terton* to discover the concealed teachings. It is not random. You know if you are a person destined to discover the *terma*.

Terma have been concealed in mountains, caves, lakes, temples, and the sky. Others have been secreted in the minds of *terma* revealers.

To this day, *terton* seek the knowledge that Padmasambhava concealed over a thousand years ago in the jagged, rough landscape of Tibet, the sky above, and in the minds and dreams of disciples.

Once a *terma* is revealed, the *terton* is tasked with sharing it with others before reconcealing it. It is hidden again for future discovery. It is infinite.

Padmasambhava is said to reside on an island once populated with demons. There, southwest of Tibet on the Copper-Colored Mountain, the Second Buddha holds court within a three-storied palace.

THE APPROACH:

HOW TIME

BODY CLOCK

YOU MEASURE TIME. You are both the keeper and record, the extraordinary consequence of synchronies in series, a symphony of coordinated rhythms and loops: proteins polymerize, ions flow, spindles align, cells mitose, hormones surge, vesicles fuse, alveoli inflate, heart beats, neurons fire, gait steps, fingers tap, wounds heal, hair grays, telomeres shorten, perceptions prime, behaviors habituate, and memories form and fade. The pace of life means you rarely attend to its cycles. Periodically your origins interrupt; you are humbled by jet lag, stubble, menstruation, death. As an amalgamation of chemical reactions, you should not be happening. Every drawn breath is a laugh in the face of time, endowed by time's lifelong trickster: the enzyme. A few degrees too many, they denature and you stop. Time is the reason you sweat.

As timekeepers, as with most things, we are most reliable unconscious. Even in the absence of external cues, the zeitgeber, our internal rhythm, oscillates around twenty-four hours and eleven minutes. The orchestration or precision timing required to traverse traffic, shake a hand, or utter a word lies below our threshold of awareness, in the order of milliseconds. And milliseconds matter. In conditions such as Parkinson's disease, schizophrenia, and autism, where time-perception is perturbed, to move is to stammer. Stuttering eyeblinks syncopate facial and verbal micro-expressions, opaquing subtle social cues. Life is rendered a series of missed beats.

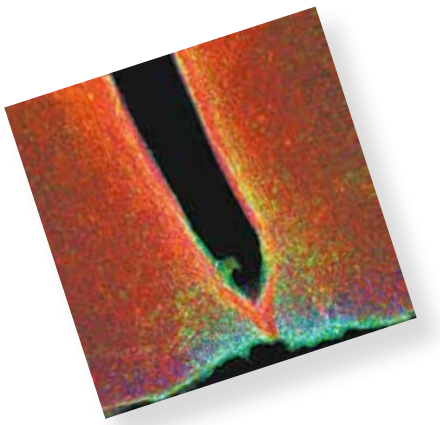
Discover the author's scientific sources at RubinMuseum.org/Spiral.

For the arachnophobe, eternity is a spider. Because our conscious perception of time is a construct that relies on memory, it is, like memory, malleable—vulnerable to distortion by emotion, attention, pharmacology, temperature, and sweat. Stimulants speed it up. Depressants and anesthetics slow it down, as do fear, sadness, and pain. Though our happiest instants may be experienced as relatively fleeting, we attribute, in retrospect, as if by some sanity-saving mechanism, far more time to them than perceived eons, lingering longer on vacations, love affairs, and first experiences than traffic jams, bladder states, or bad jokes. The valence of tedium rarely smarts. Amongst a lifetime of tears, the boredom-induced rank low.

Models for the subjective perception of time, or interval timing, propose an internal pacemaker that produces time units which accumulate, ultimately to be compared to stored reference time durations. What and where is this pacemaker? These reference times? Is it the basal ganglia spiny neurons, with their repetitive firing rate? Maybe. Or the anterior insular cortex, which seems to integrate information of all things self? Lesion and imaging studies present many possible candidates for the location of pacemakers and accumulators. The finding, or its lack, of a single time-sense organ suggests that time is perceived over distributed regions, perhaps in a number of ways.

THE PREPARED MIND

WHAT TIME SHOULD I set the alarm? Subway or cab? Can I see myself living in this apartment or city? Prospection, or future-thinking, includes simulation, prediction, intention, and planning. Reliant on memory, prospection is also shaded by emotion. Depressed people have goals and place importance on them, but they are less positive about their occurrence, feel they have less control over them, and forebode negative events as more likely to happen. Life appears hopeless. The nondepressed are overoptimistic, consistently underestimating the time required to complete tax forms, assemble furniture, and build buildings. Next time you are late, blame it on the planning fallacy. Affective forecasting is our ability to anticipate the emotional impact of a future event. We are good at predicting quality (positive or negative), but not



Singing the body electric, one cell at a time

BY *Leah Kelly*

Stained neurons in the region of the brain that controls circadian rhythm; image provided by the author. Hand illustration by Steven Noble.

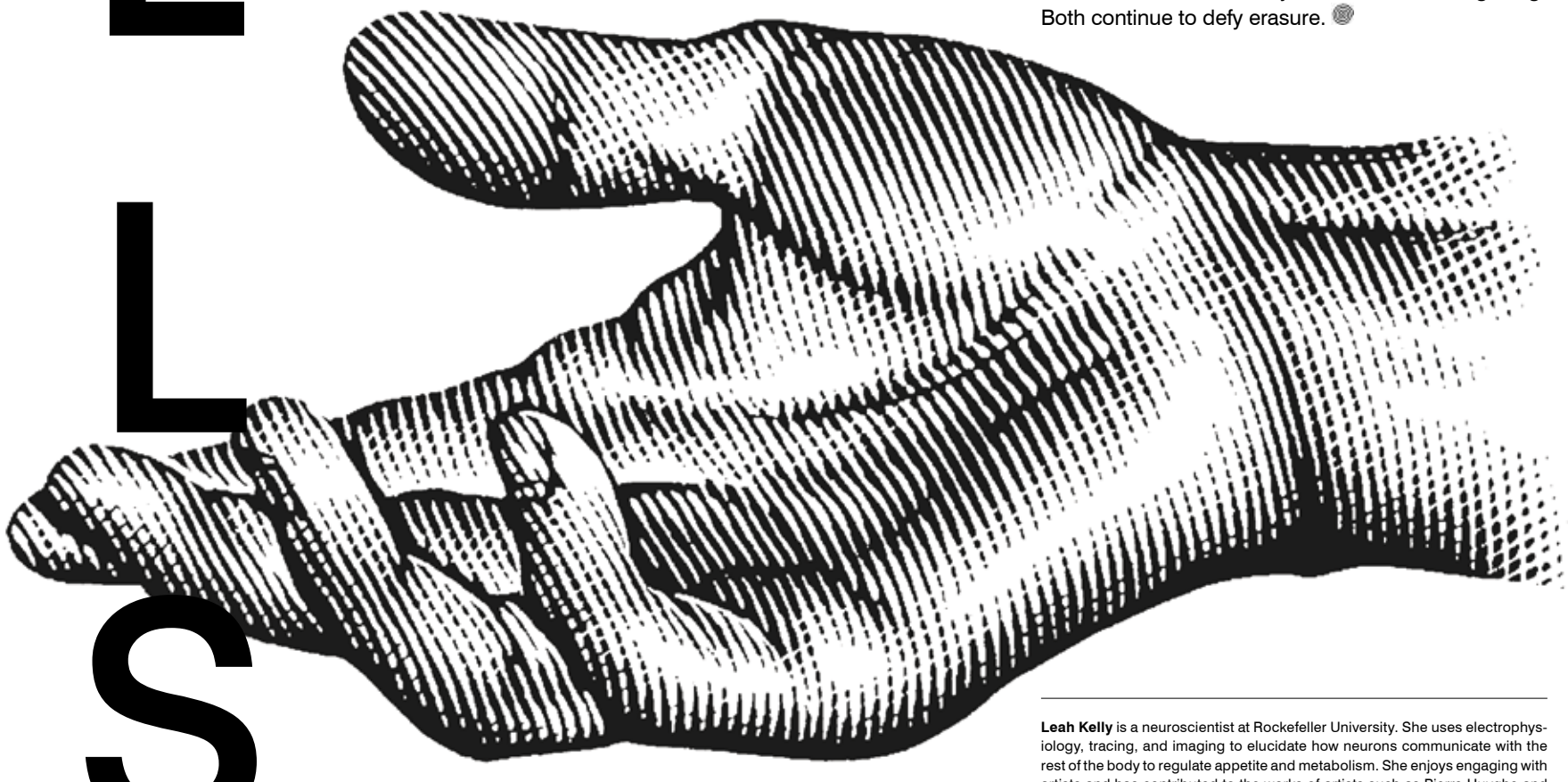
quantity (how positive or negative), underestimating the benefits of positive interactions with strangers and the pain of being socially excluded or mildly insulted.

Can goldfish be impulsive? Bacteria patient? Do adolescent lobsters molt recklessly? Do self-sabotaging starlings procrastinate their migration? Because we can conceive of a future, we can plan for and anticipate one, foregoing immediate rewards for ultimate payoffs. Delayed gratification is context dependent and follows a delay discounting rule: the larger the reward, the longer we can wait. Imagining a positive future self is more difficult for the depressed and stressed. Patience and tenacity are blunted. Projects and diets are readily abandoned. The focal length of an addict's horizon is limited to the next hit.

THE NATURAL ORDER

TIME IS TIED to metaphor, bound in space. We move through time. It flows past us. The sun rises in the east, the moon waxes and wanes, but the way we know night follows day, death follows birth, and more crucially, lunch follows breakfast—the formation of our spatiotemporal maps—is less influenced by the geometry of the heavens and more by the language we speak. Time cells and place cells are neighbors in the brain, both residing in the hippocampus, the brain structure essential for memory. Charting time with space is universal across languages, but the direction we write dictates our mental timeline: English is left to right, and Mandarin can be both horizontal and vertical. For larger epochs, all cultures think dorsal-sagittally, looking ahead to the future with the past behind us. All cultures apart from one: Aymara speakers see the future as behind them, because the future is unknown. Elderly Aymara people refuse to talk about the future on the grounds that little or nothing sensible can be said about it. They're right. The future is imagined, hypothetical. But hypotheticals exist in all tenses. Our mind is a constellation of conditionals and counterfactuals. If time is a line, then truth is a vector.

Imagining the future *is* remembering the past. The processes are symmetrical, engage the same brain structures, and develop in parallel. An amnesiac can't do either. We deconstruct our semantic memories (what we know about the world) and our episodic memories (what has happened to us) and recombine them with intention. We remember what hasn't happened. To conceive of who we were, are, and will be is essential to the construction and continuation of the self. We can mentally time travel abstractly—chronosthesia—to think of a past and a future, but it is our autonoetic awareness, our synthesis of personal memory and intention, that enables us to not only conceive of the future but to project ourselves into it, with feeling. To maintain selfhood, we overlap considerably with our near-future iterations, but the further we project in time, the more tenuous this imaginary string of selves becomes, until it threatens to be severed, such that we appear other. Order follows time's arrow into chaos. But humans love to order. As molecules sequentially arrange themselves into structures of increasing complexity, we temporally arrange perceptions and movements into gesture, language into narrative. Life defies decay. Narrative defies forgetting. Both continue to defy erasure.



Leah Kelly is a neuroscientist at Rockefeller University. She uses electrophysiology, tracing, and imaging to elucidate how neurons communicate with the rest of the body to regulate appetite and metabolism. She enjoys engaging with artists and has contributed to the works of artists such as Pierre Huyghe and Camille Henrot. In 2014 she co-curated the Impakt Festival in the Netherlands.

HOW DOGS TELL TIME

Heightened senses help man's best friend negotiate the world

BY *Alexandra Horowitz*

Photograph by Laura Stolfi

IT'S EVENING. You relax on the sofa. Your dog lies at your feet or by your side, lazing away the hours. But is your pup having the same experience as you? Is time passing at the same rate for you both? What is your dog's experience of time?

As a researcher of dog cognition—and a person who lives and shares sofas with dogs—I seek to understand how the world is perceived differently by this seemingly familiar animal, or by any nonhuman animal. We humans see, hear, and smell only a fraction of what there is to be seen, heard, or smelled, as other animals' organs are tuned to different wavelengths, frequencies, and compounds than ours. Given their perceptual abilities, the very pace at which time passes is different for animals.

Consider how dogs see. We know that dogs' vision is different than ours; in contrast to our trichromatic vision, they have dichromatic, two-color vision. Does it change how they sense time? The rate at which cells of mammalian eyes transduce light is called the flicker fusion rate. It's akin to the number of "snapshots" of the world that the eye can take in every second. The human flicker fusion rate is about sixty hertz; we see anything above sixty "frames" per second as a smooth, continuously running image. Old movies took advantage of this rate to convince the eye that a series of still photographs was really a moving image. But slow those films down and we see the frames—a "flicker."

The flicker fusion rate for dogs is around eighty hertz. For dogs, the old movie would appear as a sequence of still images. They see more frames per second, as if seeing a bit more of the world each second, and they see motion a split second faster. Your dog may be brilliant at catching a Frisbee or a cube of cheese suddenly tossed her way: she sees it before you do. Her seconds are fuller than ours.

Olfaction, the primary sense of dogs, may similarly change time, but on a larger scale. Highly attuned to odors that we cannot or simply do not notice, dogs perceive how the smell of a room changes throughout the day, as the room warms and air rushes to the ceiling. Stepping outside, the dog smells the past, in odors resting on the ground, as well as the future, in odors carried by air currents from down the street or across a river or field. What counts as the present moment for dogs is extended to include odors of events from both the past and times ahead. When you leave your dog at home for the day, he surely notices as the odors of your presence—as we always effuse our scent—gradually diminish. Once they have dimmed sufficiently, your dog knows it is time to expect you home.

As fixed and unwavering as time feels, our perception of time is a construct. Imagining ourselves into the sensory world of another species is a way to appreciate the different ways we experience our days.

Alexandra Horowitz is the author of *Being a Dog: Following the Dog into a World of Smell* and *Inside of a Dog: What Dogs See, Smell, and Know.* She teaches at Barnard College, where she runs the Dog Cognition Lab. She lives with her family and two large dogs in New York City.

MENTAL NOTE

Everyone's View of the World Is Different

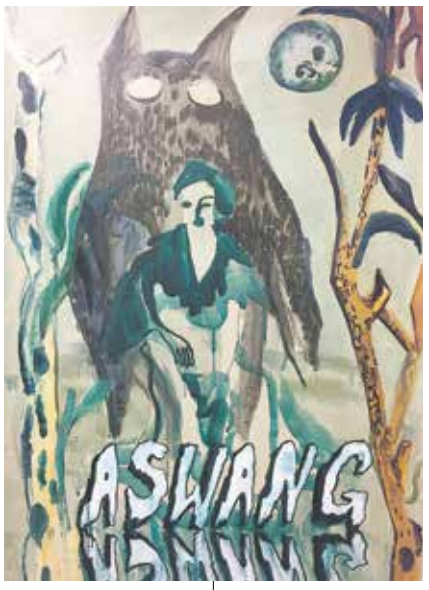
by David Eagleman

Looking across the animal kingdom, you see animals with different senses who therefore experience the world differently. If you are a blind bat, your whole world is pieced together from echolocation. If you are a tick, you can only sense body odor and temperature. If you are a black ghost knifefish, your world is defined by perturbations in electrical fields. It is presumably quite different to be one of these animals than it is to be a human, because each species constructs the world out of different sensory material.

This holds true even when we compare humans to one another. Given that we all have unique genes and experiences, each of us is the sole inhabitant of our own planet, like Matt Damon's character in the 2015 movie *The Martian*. We communicate across planets to one another with a thin bandwidth of language. We say, "Doesn't this fish taste delicious?" or "Doesn't that painting look beautiful?" but we never know what the experience is like in another person's mind. Your perception is a function of your genetics and every life experience you've ever had. These make you who you are.

I've long wondered how different animals perceive time. It is difficult to study. I have hypothesized that our perception of time relates to how far in the past our experience extends, so if you are a small animal like a hummingbird, it doesn't take long for information to travel from the tips of your wings to your little brain. I suspect that hummingbirds live closer to the present than an elephant, who must wait for a signal from its back foot to move up a long spinal cord to the brain. If an elephant wants a unified conscious perception of what is happening around it, it must wait to collect all the information, meaning it lives further in the past.

See these posters and more, along with new works by Chitra Ganesh, in the Rubin Museum's exhibition *Chitra Ganesh*: *Face of the Future*.



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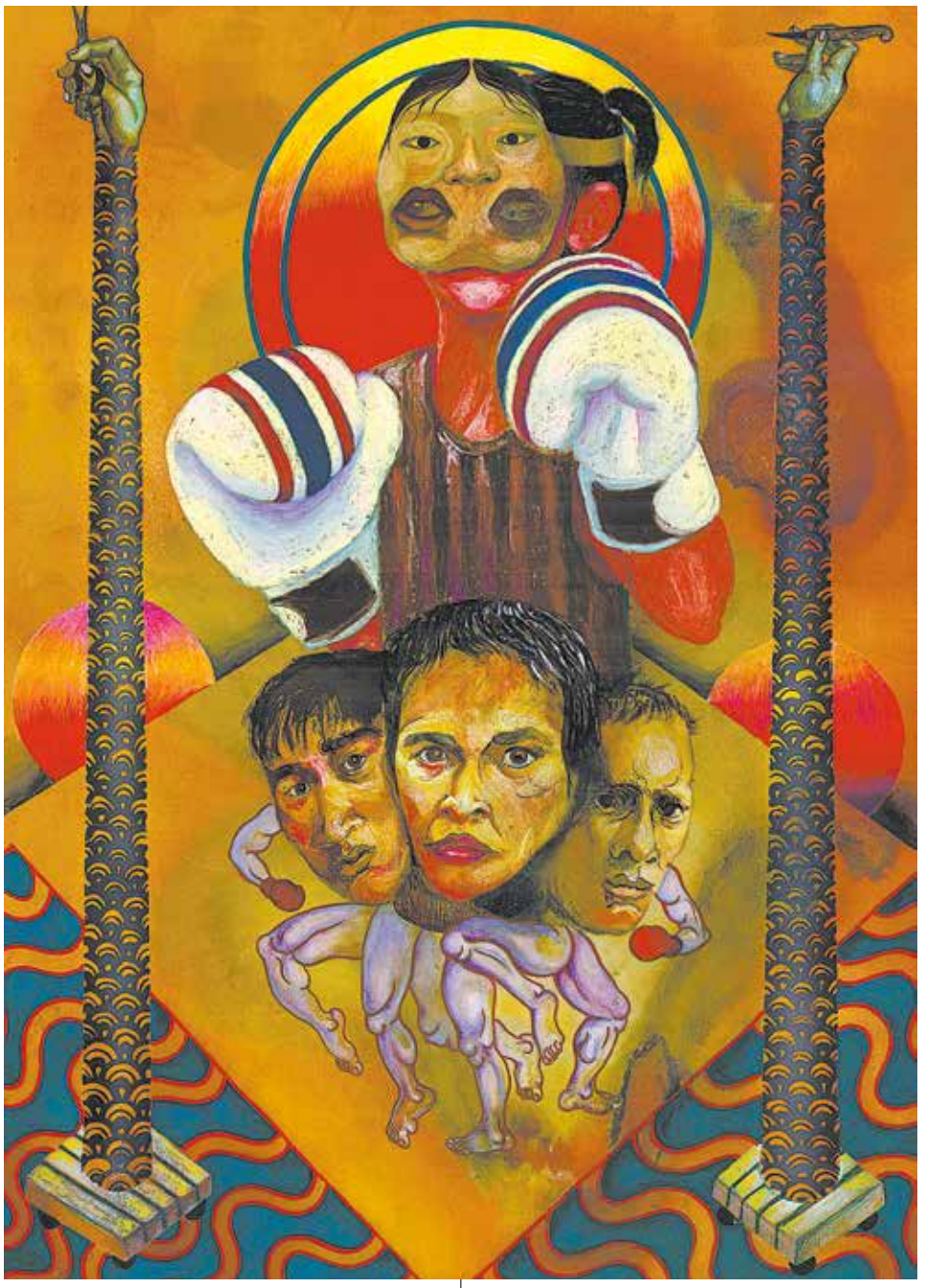

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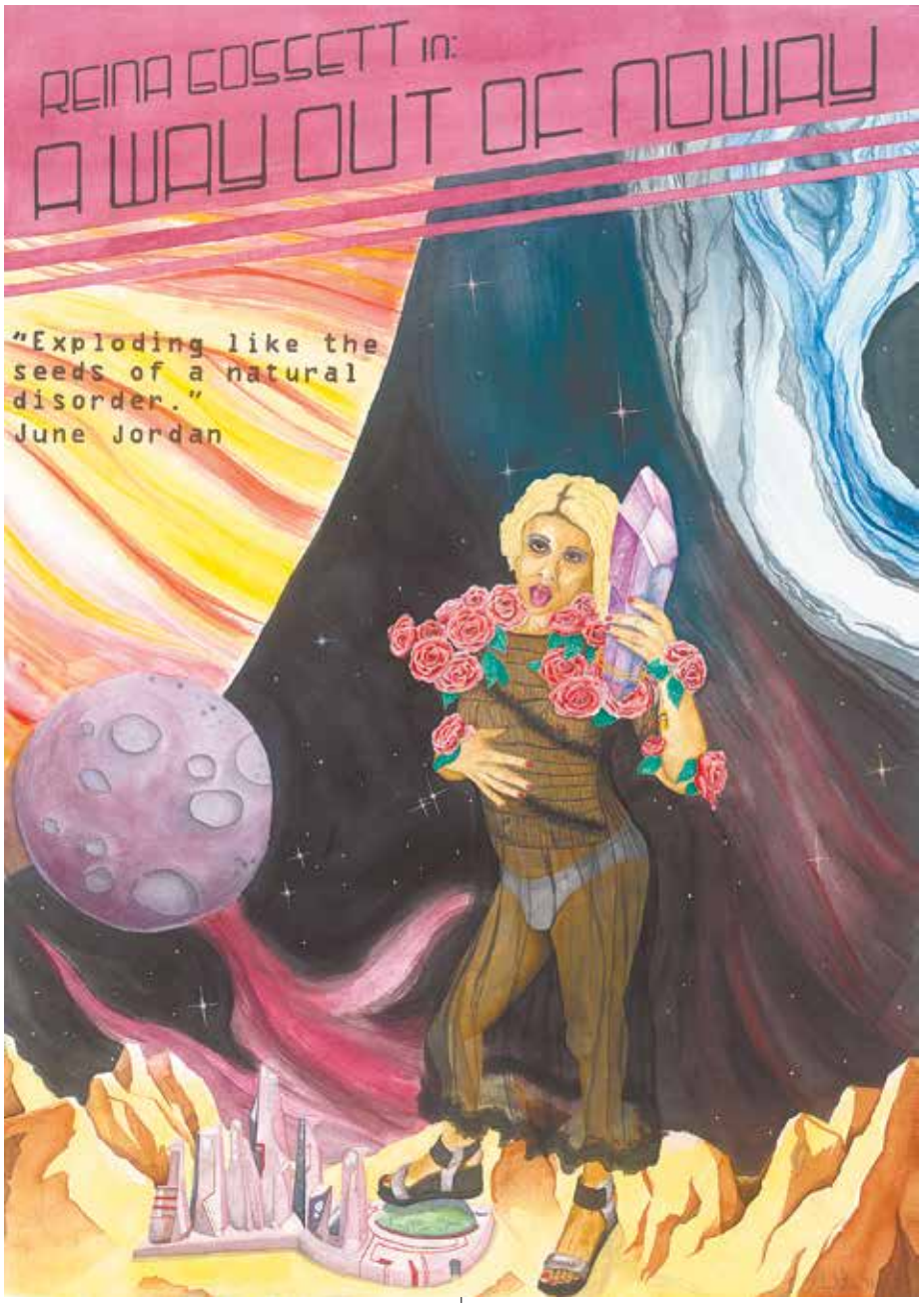
1. Maia Cruz Palileo (b. 1979, Chicago, IL); *Aswang*, 2017; ink, graphite, gouache, and oil on paper; 41 x 29 in.; courtesy of the artist **2.** Anuj Shrestha (b. 1977, Kathmandu, Nepal); *This Carceral Earth*, 2017; digital print; 41 x 29 in.; courtesy of the artist **3.** Sahana Ramakrishnan (b. 1993, Mumbai, India); *Beast of Three Nations*, 2017; digital print; 41 x 29 in.; courtesy of the artist **4.** Tuesday Smillie (b. 1981, Boston, MA); *The Seeds of a Natural Disorder*, 2017; giclée print; 41 x 29 in.; courtesy of the artist **5.** Tammy Nguyen (b. 1984, San Francisco, CA); *Atlas Holds the World*, 2017; watercolor, collage, pastel, and colored pencil on paper; 41 x 29 in.; courtesy of the artist

FACE OF THE

Contemporary artists reimagine the aesthetics of science fiction, amplifying the visual imagery of posters created beyond the confines of Western cinema and storytelling.



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Maia Cruz Palileo is a Brooklyn-based artist influenced by her family's oral histories. She is a recipient of the Jerome Foundation Travel and Study Program Grant, Rema Hort Mann Foundation Emerging Artist Grant, NYFA Painting Fellowship, Joan Mitchell Foundation MFA Award, and the Astraea Visual Arts Fund Award. • **Tammy Nguyen** is a multimedia artist working with geopolitics, science, and lesser-known histories. She has a BFA from the Cooper Union and an MFA from the Yale School of Art. Nguyen was a Fulbright Scholar in Vietnam and an artist-in-residence at the Lower Manhattan Cultural Council Process Space program, and she is an Asia Delegate for the Carnegie Council. In 2016 Nguyen founded Passenger Pigeon Press. • **Sahana Ramakrishnan** was born in Mumbai and raised in Singapore. She completed her BFA in painting at RISD and now lives in Brooklyn. Her work mixes pop cultural references with Hindu, Buddhist, and Greek visual mythologies and has been exhibited at the Rubin Museum, the NARS Foundation, Field Projects, Gateway Project Spaces, Elizabeth Foundation of the Arts, A.I.R. Gallery, Front Art Space, and more. • **Anuj Shrestha** is a Nepali-American cartoonist and illustrator. His comics have been listed in several editions of *The Best American Comics* anthology. His illustrations have appeared in the *New York Times, New Yorker, McSweeney's, Playboy*, and *Wired,* among others. He currently resides in Philadelphia, PA. • **Tuesday Smillie** is a visual artist in New York. Her work has been featured in *Artforum, New York, ARTNews,* and *VISION Magazine* and exhibited at the New Museum, Rubin Museum, Artist Space Books, and Judson Church, with forthcoming solo exhibitions at the Rose Art Museum and Participant Inc. Smillie was inaugurated as the Museum of Transgender Hirstory & Art's first resident artist. She is an Art Matters grantee.

FUTURE

VIRTUAL

REALITY

IS

BUDDHIST:

AN
INTERVIEW
WITH

SHEZAD DAWOOD

Shezad Dawood (b. 1974, London); *Kalimpong* (stills), 2016; virtual reality; © Shezad Dawood; courtesy of Timothy Taylor, London/New York

The artist's virtual reality work *Kalimpong* layers ideas and media linking Buddhism, technology, art, and historical and speculative narratives.

Howard Kaplan: Jawaharlal Nehru, India's first prime minister, called Kalimpong "a nest of spies." When did this modest hill town in West Bengal—a politically charged hotspot, as well as a meeting point of history, religion, espionage, and cryptozoology—first catch your eye?

Shezad Dawood: I first learned of Kalimpong as a teenager reading Alexandra David-Néel's *Magic and Mystery in Tibet* (1929). There she describes meeting the Thirteenth Dalai Lama on the outskirts of Kalimpong in April 1912. David-Néel also wrote about meeting *naljorpas*, reclusive monk sorcerers in the caves above the city. I didn't come back to Kalimpong until I was in my thirties and came across the story of Tom Slick—one of my favorite rabbit holes—a Texas oil millionaire who had a passion for cryptozoology, which is the search for mysterious, speculative animals. He funded three expeditions in the mountains above Kalimpong in search of the Yeti.

What inspired you to use virtual reality (VR) to tell a story about Kalimpong?

I have a few friends who are (somewhat) maverick coders and developers, and they had been encouraging me for a few years to experiment more and more with the form. I had been waiting for the technology to get to where I wanted it to go, and for the right story idea to present itself. Kalimpong became the perfect first vehicle to present my work in VR more publicly. And given the whole backdrop of Esoteric Buddhism to the narrative and geography of Kalimpong, this became a great philosophical point of entry to discuss the whole nature of reality and illusion. In a certain fashion, Esoteric Buddhism has been talking about virtual reality for over a thousand years.

The idea of a link between Esoteric Buddhism and VR is mind-blowing.

Time is Vedic: time is circles stacked upon one another—all time is one. We have this Vedic notion in terms of simultaneity that all times coexist. Rather than past, present, and future, they are set one upon the other. The Vedic scriptures anticipate the virtual technology of the past five to ten years. Buddhism and Hinduism talk about illusion, reality being a projection hologram—what might be interpreted in contemporary terms as a hologram. Philosophically, the idea of virtual reality is not new, but mechanically…we're still working through the clunkiness of VR and figuring out what context is best realized through this medium.

You've said that *Kalimpong* is about time displacement and how the past can anticipate the future and the future can anticipate the past. Can you talk a little about these ideas?

Well in some ways it's quite pragmatic. For example, I'm interested in foreign interests conspiring with and against each other in the Himalayas, from the Russians and the British as part of the nineteenth-century Great Game and, later, the Japanese. Then in the post-Second World War period, I'm interested in the coalescing of postcolonialism and the Cold War, with competing interests from China, India, and the United States playing out their intrigues, all of which continue to feed into the present, in terms of governments putting on their masquerades, while still competing for resources and trade routes in the way they have been doing for millennia. It is these quite factual loops I'm also interested in, as they provide clues for the future to anticipate the past.

When the viewer "walks through" the Himalayan Hotel in the virtual reality experience of *Kalimpong*, there's an image of Padmasambhava from the Rubin Museum's collection. How does this Buddhist master fit into the story?

It was very kind of the Rubin to allow me access to the collection in the development of the work, and of course Padmasambhava is the key to understanding what the work sets out to do. It is really speaking to an idea of collapsing various times and narratives, and in so doing questioning the whole construct of what one might term the "real," particularly the cognitive structure of linear time we use to make sense of it.

The idea of layering seems to be part of the DNA of your work, be it in painting, textile, or immersive VR. How do you work with layers of time and media?

It's very structural. This idea of consonant layers and ideas that can coincide and interface is very much how I start to think of depth: whether that's in painting, where I see it almost as a series of planes or rectangles that emerge out of a painting and at the viewer, or in film, where I see them line up as frames that cut and dissolve into one another.

Sound is integral to the VR experience. After working in experimental film and video, what were the challenges in creating sound in a virtual space?

I'm interested in sculpting sound and how you can create an added level of immersion. I work with Rupert Clervaux, and we were both kind of dumbstruck—for all our experiments in nondurational sound, there was still a linearity. In VR, however, without a fixed beginning, middle, and end, you have no control over how long a viewer will stay in one section of the scene. What does that do to a sound design? A kind of space that bleeds through time. You are trying to avoid at all costs a repetition where the sound loop breaks on itself.

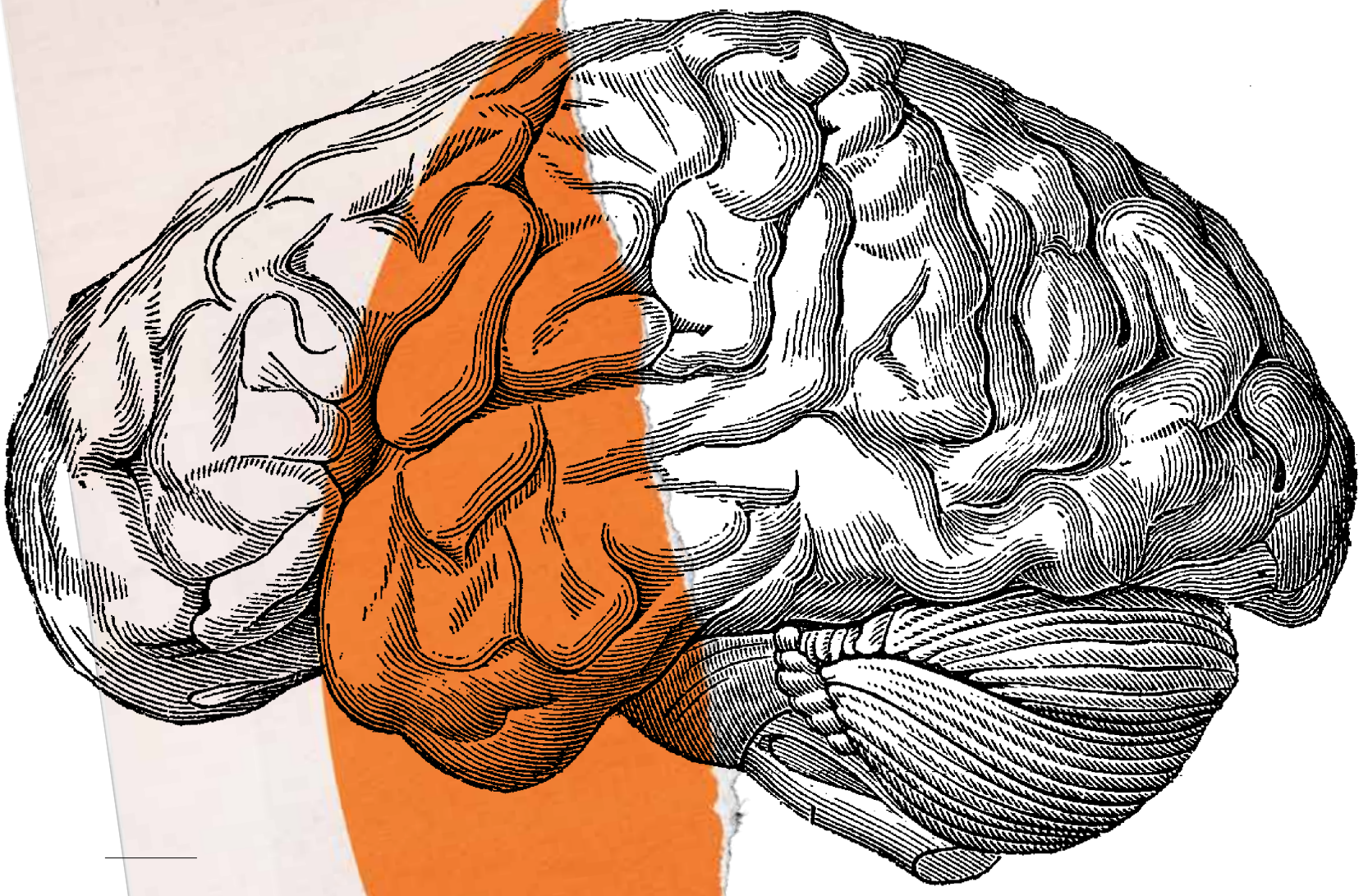
Is there a relationship between VR and the Buddhist concept of the bardo, the intermediate state between death and rebirth?

Ha! The question. I very much thought of the bodiless state of the bardo when conceiving *Kalimpong*, and in a way, we are returning here to Padmasambhava, to whom the *Bardo Thodol*, or *Tibetan Book of the Dead*, is often attributed. It is interesting that Padmasambhava was also responsible for bringing Buddhism from India to Tibet given the more recent roles played out between India and Tibet, such as India's hosting of the Dalai Lama. And to go back to the bardo, I ended up structuring the whole VR experience around the three stages and six states of the bardo that occur between waking life and rebirth. I really wanted the audience to have an experience of that in some small way, while also getting sucked into some of the subplots woven in there, including a history of Himalayan textiles, artifacts and glitches borrowed from a short history of video and new media art practice in the 1970s, and Tom Slick's yeti expeditions. But that's another tale…

Experience *Kalimpong* at the Rubin Museum's exhibition *A Lost Future*. Visit RubinMuseum.org to reserve your timed ticket.

Shezad Dawood works across film, painting, and sculpture to juxtapose discrete systems of image, language, site, and narrative, using the editing process as a method to explore meanings and forms. Dawood trained at Central St Martins and the Royal College of Art before undertaking a PhD at Leeds Metropolitan University. He is a research fellow in experimental media at the University of Westminster.

DAVID EAGLEMAN



Living in the present is probably impossible

BY *David Eagleman*

ON TIME

IT'S EXTRAORDINARILY DIFFICULT for a human to live in the present. I recognize this is the goal of many spiritual practices, but what makes our brains special is our capacity to unhook from the present and transport to different points in time. We spend time living in simulated futures, thinking, for example, "What will happen if I say this?" We live in the past, reliving moments that no longer exist. And we spend time in the world of counterfactuals, questioning, "Where would I be if I had done that instead of this?" We constantly travel these other roads in time. It is a big part of what makes us successful as a species. If you can play out possibilities, future and past, then you can simulate the effects of a new hunting strategy, an improved way to plant crops, or a novel social maneuver. Instead of attempting everything in the real world, you can test it in the dark safety of your skull. As the philosopher Karl Popper said, this capacity "allows your hypotheses to die in your stead."

Children don't have the same prospective view as adults. As adults, we've had a great deal of experience, so we have a rich notion of the future and past. Children don't have the same experience and long timescale to draw on, so they live closer to the moment. I don't mean this in a spiritual way; I simply mean they don't yet have the capacity to think about consequences or options, or even chew over past outcomes. Instead they experience what is happening right now. As they learn more, they lay down an increasingly wide lawn of the future and the past, eventually growing into all of the joys and sorrows of adulthood.

How do you live more spiritually in the present, given that you have a brain that is always dancing around in time? I don't know if it's possible.

WE LIVE BEHIND THE TIMES.

THERE IS NO SUCH THING as now. We live in the past by about half a second. Why? Because the brain is always collecting information from all the senses: from your eyes and ears to your fingertips and toes. These pathways process information at different speeds, so information comes streaming into different parts of your brain at slightly different times. The job of your consciousness is to collect the information, stitch it together, and serve a story of what just happened. It takes time to put everything together, and as a result, we are always living in the past. By the time you've processed all the information about a moment, the moment is long gone. Your conscious perception of the world is always lagging, so your experience of the moment right now is actually a delayed reality. It is similar to a live TV show like *Saturday Night Live*, which is not truly live but slightly delayed in case someone cusses, an actor falls, or a clothing mishap occurs. It mirrors our perceptual experience: we are always living in the past.

The distance you live in the past can change. When you are a child, it takes a certain amount of time to send signals out to your limbs and have sensory feedback return to the brain. As you grow and your body gets larger, the round-trip time for signals is longer. Adults therefore live slightly further in the past than children. For that matter, I suspect that tall people live further in the past than short people.

THE BRAIN RECALIBRATES THE NOW.

THE BRAIN CONSTANTLY recalibrates its notion of now. Imagine you are in a dark place and you step into the sunlight. It now takes a different amount of time for the cells in the back of the eye to send signals to the brain. But the bright light has no effect on the amount of time your inner ear requires to send signals to the brain. Your sensory systems are always adjusting in relation to one another to figure out correlations of events in the outside world.

Time and memory are always intertwined.

In my lab I showed that people with schizophrenia don't appropriately recalibrate their timing. Imagine that you slightly mistime the commands you send to your limbs and the information you receive through your senses. This mistiming would change your interpretation of the world. Think of how you continuously generate an internal voice and listen to that voice. If you reversed that timing, even by a few milliseconds, it would become an auditory hallucination. You would attribute the voice to someone else, because you would think you heard it before saying it. A common symptom of schizophrenia is credit misattribution, which involves not taking credit for your own actions, saying, "That wasn't me. I didn't do that." The same issue is at hand; taking credit is fundamentally a temporal judgment—as in, "I made an action, and I got the proper feedback." If your timing is miscalibrated, then credit misattribution is an expected outcome. With a number of experiments, I showed that the cognitive symptoms of schizophrenia are related to a miscalibration of timing.

TIME IS NOT A RIVER THAT FLOWS THE SAME FOR ALL.

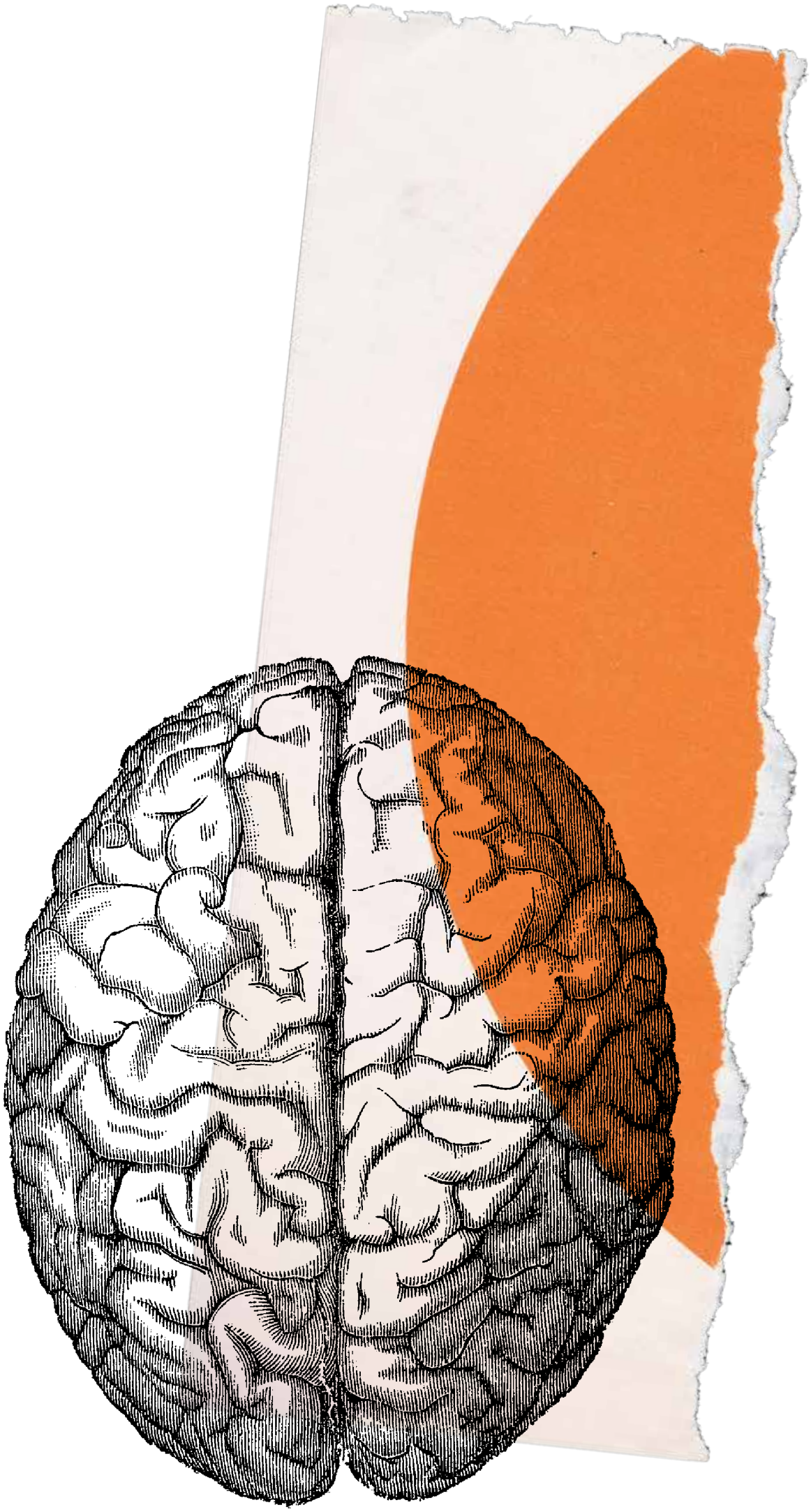
EINSTEIN DEMONSTRATED that time is relative. As an example, imagine traveling to outer space at an incredibly high speed, say half the speed of light. You have an identical twin who remains back on earth. When you return to this planet, you will be a bit younger than your sibling, because you have been travelling at a much faster speed, so time has ticked forward for you more slowly. I think neuroscience will make Einstein's theory of relativity even stranger. For seventeen years I have studied what I call neurorelativity, the concept that you and I can witness the same event but have totally different interpretations about what happened (how long it took, what happened first, etc.), depending on what is occurring in our brains. If you are bored or excited, or primed differently or pay attention differently, your perception of time will be distinct from mine.

TIME MOVES IN SLO-MO.

PHYSICAL TIME RUNS at a fixed speed here on earth, but depending on how you lay down memory, events can seem to have taken a longer or shorter time. In a series of experiments, I showed that in a life-threatening situation you lay down dense memories, so when you look back on the event, you remember it taking a long time. In contrast, if you are doing something boring, like sitting on an intercontinental flight, you lay down few new memories. As a result, when you try to recall the details of the flight, it seems to have disappeared rapidly.

Fascinatingly, time is viewed differently if you're looking at it backward or forward. I've been talking so far about the retrospective view of time, in which rich memories equate to an event having seemed to take a long time. But prospectively—that is, looking ahead—the situation is different. While you are sitting on a boring flight, it seems to take forever, because you keep consulting your watch, checking the time to determine when the flight will be over. It's a watched pot that never boils. Conversely, when you're having

When have you perceived time differently? Describe your experience at RubinMuseum.org/time and we'll publish our favorite submissions in the online version of *Spiral*.



a great time running around with old friends, you never consult your watch, and you're surprised when the day is over. Time has flown.

I started studying time because when I was eight-years old I fell off the roof of a house. The fall seemed to have taken a long time. In high school I took a physics class and calculated that the whole event lasted 0.6 seconds. I couldn't understand how the fall was so rapid yet seemed to have taken so long: I had clear thoughts during the fall. I became a neuroscientist and started investigating this phenomenon. I put the word out that I was studying this issue, and I received dozens of emails from people who had been in car accidents or experienced other traumatic events. They also said time had moved in slow motion.

I created a scientific test, putting people in a terrifying situation and measuring whether they could actually perceive time in slow motion. Specifically, I dropped them from a tower a hundred-and-fifty feet high, backward, in free fall. A net below caught them as they moved seventy miles per hour. The fall is extraordinarily scary; I did it myself several times in preparation for the experiment. I measured several things about their perception of time during and after the fall. Long story short: it is all about memory. The people falling were no faster in perceiving information than someone on the ground. But because the event was scary, their brains laid down more memories. When their brains later read out denser memories, they presumed the event must have taken longer, and must have proceeded in slow motion.

In this way, time and memory are always intertwined, and it is impossible to study how long something seemed to have lasted without understanding how much memory was laid down. We have memory to take notes about what is important. When you are in a life-threatening situation, your brain captures as much data as possible. In contrast, when you are strolling down the sidewalk on your way to work, your brain is not writing down a lot of detail. Hence why traumatic events seem, retrospectively, to have lasted a long time.

David Eagleman is a neuroscientist and *New York Times* bestselling author of *Incognito: The Secret Lives of the Brain* and *Sum: Tales from the Afterlives*. He is the writer and host of the Emmy-nominated PBS television series *The Brain*. Eagleman is an adjunct professor at Stanford University, a Guggenheim fellow, and the director of the Center for Science and Law.

Aria in her modeling days

TIME ON RETREAT

Aria Drolma left her career as a fashion model, embarked on a traditional Buddhist three-year and three-month silent retreat, took the vows of an ordained Buddhist nun, and learned how to live in the present moment.

Howard Kaplan: Was there a difference in how you perceived time before and after you entered the retreat?
Lama Aria Drolma: Yes, a big difference. While living in New York City, the value of time is material, and you often hear the phrase "time is money." Likewise during the three-year retreat, time was very important, but in a different way. We contemplated "Time and Impermanence," one of the four Buddhist thoughts that turn the mind to dharma. It teaches that everything in this world is impermanent. The next breath may be our last. I began to understand every moment in reference to impermanence.

Did the time pass differently during each of the three years?
The first year felt very slow. The second year was a little faster than the first, and the last year zipped by! When I came out of the retreat, I wished that it had lasted one more year.

How did you mark time during the retreat?
In the retreat we followed time by the sounds of a gong or a bell. I did not wear a watch and there was one very precise clock. Each month one of us was the timekeeper. We rang a bell for breakfast, lunch, and dinner, while every practice began with a gong. The first meditation began at 4:00 a.m. I had an alarm, but I always woke up a minute or two before it rang. I developed an internal clock that I had lost when I lived in New York City. I think that's true for many people. We don't depend on our internal abilities; we tend to look outward instead.

What emotions are associated with time, specifically in terms of the future?
Before the retreat, when I thought of the future, the unknown was quite daunting, and yet at the same time, it was exciting since the canvas was so huge to create whatever I desired. By nature I'm a very positive person. I was confident I could set any goal and achieve it. But there came a time when I felt I was at life's crossroads—my spiritual seeking was overpowering. Everything that seemed exciting became overwhelmingly meaningless and senseless. My life goals that had at one point been all consuming seemed uninteresting and unimportant. I was seeking answers for my life's purpose. I was searching for more meaning in life.

When did you begin your meditation practice?
The year 2008 was a time of soul searching. I found a Tibetan Buddhist meditation center in New York City, and I was determined to make positive changes in my life. My exciting lifestyle and fashion career were becoming more and more meaningless and senseless. I made a firm New Year's resolution to start to meditate again and to enrich my life spiritually. Through the practice I began to see how our thoughts create the suffering in our day-to-day lives based on hope and fear—hope for the future and the fear that we may not attain our dreams. During meditation I learned to observe my thoughts and to not follow the past thoughts, since the past is gone, and to not follow the thoughts of the future, since it's not here yet, but to rest in the present moment.

Read the full interview at RubinMuseum.org/Spiral.

Lama Aria Drolma was born in India and has taught at the Hindu Samaj Temple & Indian Cultural Center & Jain Temple and the Chapel for Sacred Mirrors in Poughkeepsie, New York, as well as the Rubin Museum of Art, Tibet House, Harvard Business School Women's Association, and the United Nations in New York City. She also volunteers for several nonprofit organizations and has worked as a fundraiser for breast cancer and HIV-AIDS related issues.

Felix and his nephew

DOING TIME

Twenty years ago, Felix "Phill" Rosado received a death by incarceration sentence. Sean Kelley spoke to him by phone about how time passes behind bars, solitary confinement, and restorative justice.

Sean Kelley: We all assume that time moves slowly for people who are incarcerated. Is that your experience?
Felix "Phill" Rosado: No, time moves extremely fast. Days fly by, so do weeks, months, and unfortunately years. I've been here for twenty-two years. For the first decade or so, I'd say that time went a little slower. I wasn't involved in the things I am involved in now. I was pretty much trying to do everything I could to escape the reality of my situation. I wasn't necessarily living a meaningful life. That's not the case anymore. My schedule is packed. I work. I coordinate a couple of projects. I facilitate workshops. The days tend to fly by.

How did it feel when you learned that the state was going to keep you locked up for life?
When I got to Graterford I saw men who looked like they were still in the 1970s. And when I inquired, someone told me that they had been in for twenty years or thirty years; one I think had been in thirty-five. That just really blew my mind. These guys had on bell-bottoms and butterfly collars and big afros, and it was 1996. It was kind of like I had stepped out of a time machine. Once I found out what the story was with these men, it really scared me. It shook my world. And once I realized that I was in that same situation, I began to fight for my freedom.

When you were younger you spent time in solitary confinement. Did time move differently then? Did that change your feelings about time passing?
Solitary confinement is a peculiar experience for sure. When I got to Graterford I started getting into a little trouble at first, and I ended up in a restricted housing unit known as the Hole a few times, usually for ninety days at a time, sometimes sixty—being in the cell twenty-three hours a day, seven days a week. It's pretty much three meals getting delivered to the cell, a shower three times a week, and if I chose I could go outside for one hour to another cage, basically from one cage to another. That's how you break up the day. I didn't have a watch. Nobody in solitary really knows what time it is. So we schedule time around events. Basically we know what time it is by when the meal is being passed out, shift changes, and mail and medication and things like that. And sometimes the corrections officer will go by, and if he's not a smartass, we'll ask the time and he'll tell us.

Tell me about your work on restorative justice and how it might have affected your feelings about time.
Restorative justice is a new and old way of doing justice that seeks to heal harm by involving the people who are directly affected by the harm, including those who caused it. It's based on the foundation that we're all interconnected and that when one is harmed all are harmed. When I got sentenced I considered that the end of the justice process. What restorative justice taught me is that it's not the end. In some ways that's only the beginning. And so we still have opportunities to try to put things more right and to create a better life for ourselves and a better world that extends well beyond sentencing. Being introduced to restorative justice and learning that there's another way to do justice outside of the context of cops, courtrooms, and prison cells gave me new life and extended my concept of time.

Read the full interview at RubinMuseum.org/Spiral.

Felix Rosado earned a bachelor's degree in interdisciplinary studies from Villanova University in 2016. He is a cofounder of Let's Circle Up, a restorative justice project based in the State Correctional Institution at Graterford, which he coordinates alongside the Alternatives to Violence Project. He has leadership roles in Inside Out Prison Education Program, Right 2 Redemption, and Decarcerate PA. He served as an advisor to Eastern State Penitentiary's exhibition *Prisons Today: Questions in the Age of Mass Incarceration.*

Sean Kelley is the senior vice president, director of interpretation at Eastern State Penitentiary Historic Site, Philadelphia. During his twenty-two-year tenure he has overseen the selection and curation of more than one hundred site-specific installations, including *Prisons Today: Questions in the Age of Mass Incarceration*, which won the 2016 Overall Award for Excellence from the American Alliance of Museums.

BIRTH. DEATH. REPEAT.

KALACHAKRA,

BY *Alexander Berzin*

In Shambhala, the land of bliss, a battle rages between karma and ignorance

King of Shambhala; Eastern Tibet (Karma Gardri painting style); 18th century; mineral pigments on cloth; Rubin Museum of Art; C2004.5.6 (HAR 65297)

SHAMBHALA, AND THE FUTURE

IS TIME OUR ENEMY?

BUDDHISM DEFINES TIME as the measurement of change. The Kalachakra system presents three cycles of time, and its teachings assert that change can be measured by the motion of the heavenly bodies or the number of breaths we take. Both are driven by the uncontrollable force that Buddhism calls karma—the inertia that perpetuates heavenly motion and the compulsiveness that perpetuates our habitual behavior. Karma—both universal and individual—is therefore the real enemy, not time. Even more harmful is the ignorance with which, over time, we compulsively act out our neurotic social and individual karmic tendencies, producing all the problems we experience throughout life.

The cycle of lifetimes, one after another, filled with problems and culminating each time in death, is known as samsara. Its persistent march onward is marked by our perceived enemy, the passage of time. But the Kalachakra teachings offer a profound method for overcoming the ravages of time due to karma and ignorance. Instead of samsaric lifetimes ending with death, we can end our samsaric existence with the attainment of liberation and enlightenment. We can replace a dismal future, filled with unending problems, with a blissful, bright future, filled with unending compassion, wisdom, and the ability to guide others to enlightenment.

But what do we mean by the future? In contrast to Western conceptions of past, present, and future, Buddhism speaks of what is not yet happening, what is presently happening, and what is no longer happening. Your death is not yet happening; you reading this article is presently happening; your childhood is no longer happening. Your childhood isn't sitting offstage, having played its part; your death isn't sitting in the wings, waiting to come onstage. You reading this article won't go somewhere else once a new scene starts in your life. Similarly, your enlightenment isn't sitting somewhere in a place known as the future, nor is it residing deep inside your head. We will only attain enlightenment by ridding ourselves of the ignorance that drives us to compulsively act out our neurotic karmic tendencies over and again.

LAND OF BLISS

ATTAINING ENLIGHTENMENT IS therefore really a battle against karma and ignorance, a battle against the forces of time. It takes place in Shambhala, literally "the land of bliss" and the source of the Western concept of Shangri-La, represented in James Hilton's novel *Lost Horizon* (1933) as a spiritual paradise found in an inaccessible, hidden valley in Tibet. Kalachakra represents Shambhala and this ultimate battle on multiple levels—external, internal, and spiritual. This is in keeping with the Kalachakra vision of the universe, where the body and the spiritual path run in parallel. What happens in the universe and the body occurs under the influence of karma and ignorance, marked by the samsaric cycles of time. What happens on the spiritual path occurs under the influence of compassion and wisdom, bringing an alternative to these samsaric cycles: enlightenment.

Externally, in the land of Shambhala, a battle will take place many years from now. The forces upholding spiritual values will defeat an invading barbaric horde bent on destroying all opportunities for spiritual growth. Their defeat will mark the end of an age of darkness and herald the start of a new golden age. Internally, Shambhala is the heart chakra, the location of our life-sustaining energy-winds. Here a battle is waged against the invading hordes of sickness and won by the forces of medicine and a healthy lifestyle. Overcoming sickness, we attain a golden age of perfect good health.

On both the external and internal levels, the so-called winds of karma drive the invasions, passing through repeated cycles of time. On the spiritual level, Shambhala is the subtlest level of the mind, the clear light mind. When we can access and reach this deepest Shambhala, we will be able to employ sophisticated spiritual methods to stop the flow of the winds of karma. We will then attain enlightenment—the state beyond the control of samsaric time.

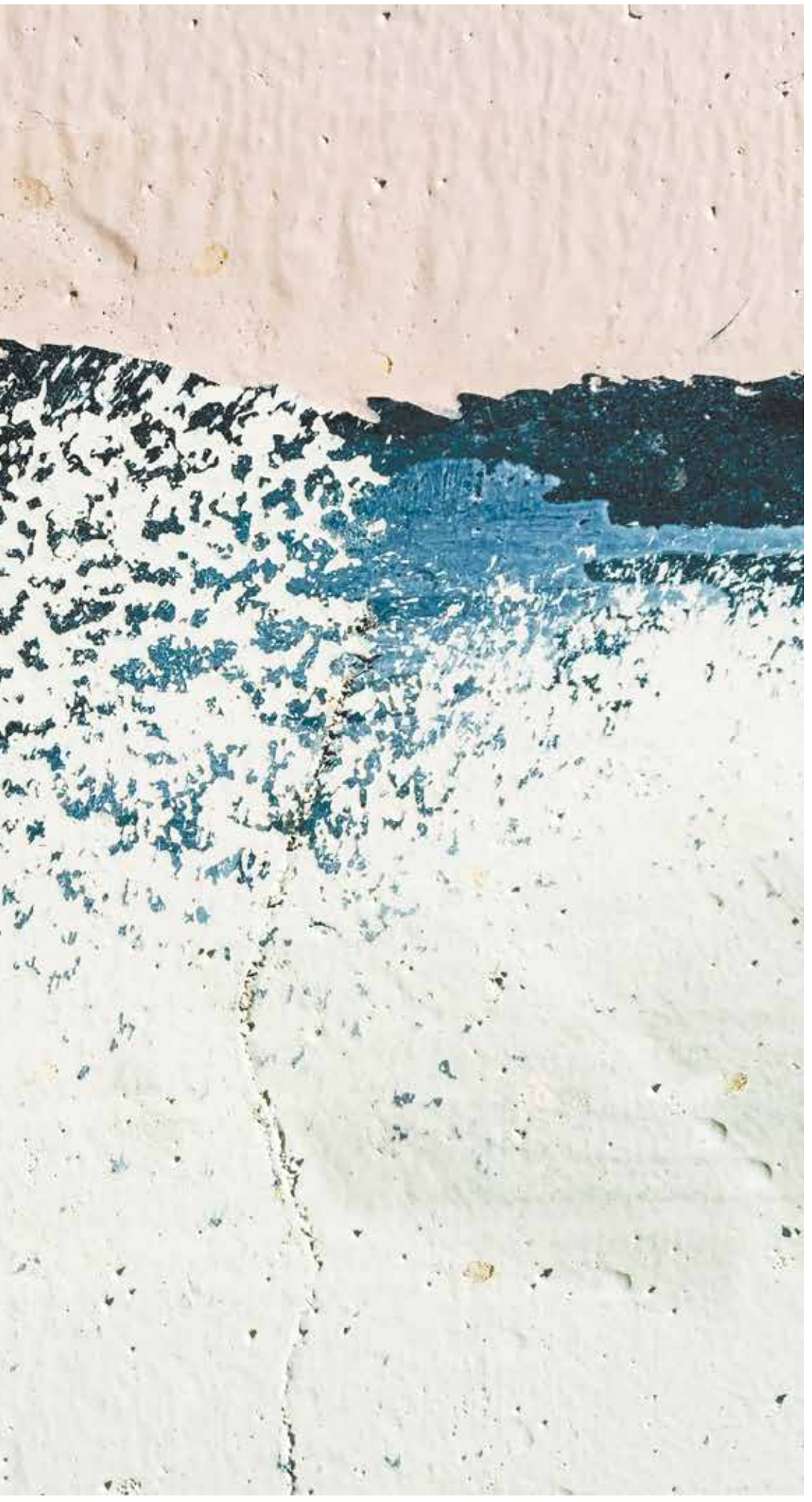
The defeat of the hordes of invading barbarians, sickness, and winds of karma has not yet happened, and like tomorrow, what will happen during these battles is not determined or fixed. It is certain, however, that tomorrow will happen, though when it begins depends on our location on earth. But in the case of these external, internal, and so-called alternative spiritual battles, it is not certain they will take place, let alone when they will occur. After all, what is not yet happening is not sitting somewhere already fixed, waiting for its turn to be presently happening. The future isn't happening now.

What is not yet happening can only arise dependently on cause and effect. To defeat an external invading horde of barbarians, our society needs to come together in peace and harmony to present a united front. To defeat an invading horde of sickness, our bodies need to bring all their systems into balance so they work together to ward off disease. To defeat the deepest invading horde of the winds of karma, our minds need to gather all the spiritual forces of the Kalachakra path, as united they have the greatest strength.

What is not yet happening—the future—lies in our hands. If we work to bring harmony to our societies, bodies, and minds, we can make what is presently happening be for the benefit of all.

Dr. Alexander Berzin is a scholar, translator, and teacher of Tibetan Buddhism, who received his doctorate from Harvard University and lived in Dharamsala, India, for twenty-nine years. The author of seventeen books, including *Relating to a Spiritual Teacher* and *Taking the Kalachakra Initiation,* Dr. Berzin founded the Berzin Archives in 2001 as part of his lifelong commitment to building a bridge between the traditional Buddhist and modern worlds. Its recently relaunched website is studybuddhism.com.

BOVE AS AI



BY *Amal El-Mohtar*

ALA SKATED ACROSS the surface of time with long, even strokes, scoring fine, shallow grooves in it with every stride. The science of it didn't much trouble her; it was for others to take time's temperature, for others to wonder at how they themselves could move through space in time while also standing on its surface. How often does a historian seek to understand the physics of why the sky is blue above a battlefield?

Ala was a historian.

She wove carefully, effortlessly through her colleagues, looking for the patch of her study. She was very keen on a density of time that contained a tense knot of 17th strata politics, where information technologies had begun to outpace people's capacity to reckon their effects. "Imagine," she'd written in her prize-winning doctoral thesis, "a blade so sharp it could bleed you dry before you knew you'd been cut."

She was looking forward to puzzling over one correspondence in particular, riddled with much-debated ambiguity thanks in part to an awkwardly placed bubble occluding the strata. But just as she was finishing her last session, the bubble shifted—infinitesimally, but enough—so with a different set of tools she could extract truly unprecedented readings. She had those tools ready now, and the snow skimming from her skates' speed might well have built an alternate timeline.

She stuttered to a stop, though, when she saw Umu at her patch.

Umu. Once her rival, then her friend, then her rival again, to their mutual frustration and

sorrow. Umu was brilliant—there was no denying it—but they'd never been satisfied by history; they would insist, not on observing the facts and interpreting them, as all sensible folk did, but on elaborating scaffolds of theory from which to hang their colleagues' work. Where Ala focused on who, what, when, why, how, Umu focused on their colleagues' methodology, their ethics, their assumptions. To Ala, Umu always seemed to be arguing that the enterprise of studying history was inherently flawed, because how could one study time without melting it, even by unobservable degrees, under one's hands or breath?

All of which, to Ala, was pointless sophistry, and she'd stated—acerbically, and more than once—that Umu might be happier studying philosophy or physics.

"Both of those have histories," they'd say, with irritating calm, "and anyway, I'm perfectly happy. Now, about the ramifications of your auger on deep strata—"

How could one study time without melting it, even by unobservable degrees, under one's hands or breath?

Photographs by Paul Emondson

And now Umu was here, scrutinizing her patch. And they weren't alone: two individuals stood nearby with a strange tool, a conical tube mounted on a tripod and pointed at the sky.

"Ala," said Umu, who looked, as always, placidly unruffled in the face of Ala's oncoming storm. "There you are. Please allow me to introduce Lyl-her and Rir-him, from the Faculty of Futurisms."

Ala raised an eyebrow, but to her credit, did not actually say *those cracks*? "Charmed. But what are you doing on my patch? I have important work to be getting on with."

"Yes, about that," said Umu, looking at Lyl and Rir, who held each other to keep from wobbling. They weren't used to historian skates.

Lyl coughed, then said, in a voice so gravelly Ala briefly worried it would soften her patch, "Your time is melting."

Ala frowned. "I've accounted for that, of course. Every deviation I cause I document. It always freezes over again. And anyway, what does that have to do with you?"

Rir leaned forward, spoke gently. "We've noticed a significant increase in ambient timeperature, and it seems to be radiating out from your patch."

Ala rolled her eyes. "It's a volatile piece of time, I grant you, but it is also, as you see, frozen."

"But your interference, Ala," said Umu, quietly. "What were you going to do today?"

"I was going to reassess the correspondence between the principal actors in the events of Strata 17-234-51, in light of new clarity," she said, testily, arms folded. "All perfectly above board, surely?"

"I thought," said Umu, "that correspondence was occluded."

"It was," said Ala. "But the occlusion—" she frowned, looking down at her patch. "Wait." She sank to her knees, drew out a magnifying tool, squinted.

The bubble's shift was no longer infinitesimal. It was a whole observable inch over from where it had been her last session.

Ala looked up, confused and troubled. "This is impossible."

"I have been theorizing," said Umu, and Ala gritted her teeth, but listened. "We accept as true that we must study history in order to keep from repeating it. I say this is necessary but insufficient; if we study history carelessly, it will shape us into tools for iterating itself. If we study and extract and mine frozen time without interrogating our means and ends, we will build channels for it to flood us with itself."

Ala blinked. "Flood? Surely that's excessive hyperbole."

Umu shook their head. Lyl looked at Rir, then at Ala, before murmuring, "I read your thesis, Ala-her. You write very well. The line about the blade so sharp—it has haunted me for sessions, driven my own research."

Ala could not help but soften in the face of praise for her work. "Thank you."

"But I always wondered—how could you see that and not relate it to the world around you? How could you be so focused on plunging your gaze deep into the time beneath that you ceased to look at the time around?"

She shrugged. "I try not to take my work home with me."

"They are not as separate as you think," said Umu. "Look."

They pointed one gloved hand upward, at the sky.

Ala narrowed her eyes at it. "I don't understand. It's cloudy. That's normal."

"It hasn't always been," said Rir, softly. "It was once clear enough to see stars. If you look closely—"

He gestured her toward the narrower end of the conical tube, and directed her to place her eye against it. She did—and gasped.

The sky's cloudiness was not the uniform mass of opacity it had seemed to her naked eye; there were thin, whirling lines, some of them appearing even as she watched, with a long, lazy pace that struck deep familiar chords in her.

She pulled back—blinked—looked around at her historian colleagues. She put her eye back to the conical tube.

The lines in the sky appeared at the same pace as her colleagues' skating.

"The prophets say, 'every action has an equal, opposite reaction,'" murmured Umu. "That heat we make—it ripples through time. Below us—and above."

Ala's throat was full, but she had nothing to say.

She was still looking up at the sky when it began to rain.

Read the author's ruminations on time at RubinMuseum.org/Spiral.

Amal El-Mohtar has won the Hugo, Nebula, and Locus awards for short fiction and the Rhysling award for poetry three times. She reviews books for NPR and the *New York Times*, and lives in Ottawa with her spouse and two cats. *This is How You Lose the Time War,* a novella co-written with Max Gladstone, is forthcoming in 2019 from Saga Press. Find her online at amalelmohtar.com or on Twitter @tithenai.

BECAUSE THE PRESENT ISN'T ENOUGH:

A Victorian meme touches down in the twenty-first century

JAMES GLEICK ON TIME TRAVEL

Howard Kaplan: Why do we need time travel?
James Gleick: We need it to cope with regret. We need it to explore history, to think about the past, not necessarily in a scholarly way, but what brought us here—we want to experience it. Some time travel is the desire to do something over. Above all, we need it to escape death. It's our chance at immortality. We are, apart from any science technology, already time travelers. All time travel stories, in one way or another, are about trying to evade the inevitability of death.

Tell me about H. G. Wells and his novella *The Time Machine* (1895).
Wells thought of himself as a futurist. People were full of excitement about the future and wondering what the year 1900 would bring. Science was bringing modern wonders, and an author like Jules Verne was very much about modern wonders—boats that can travel under the sea, ships that could take us to the moon. The funny thing is that's not what H. G. Wells was interested in. When you read *The Time Machine*, you realize it's a peculiar book. The time traveler only goes to the future, and the future that he discovers is not at all marvelous. It's degenerate; there's a kind of misery and a kind of bifurcation of the race into Morlocks and Eloi. It's really a chance for Wells to explore some of his ideas about social evolution and human evolution—another new theme in our scientific tool kit thanks to Charles Darwin.

In addition to George Pal's 1960 film adaptation of Wells's book, what would you consider the best movies about time travel?
An absolute must is *La Jetée* by Chris Marker from 1962. It's thirty minutes, it's black and white, it's obscure, it's brilliant, and rarely seen. A lavish remake of that movie is *12 Monkeys* (1995). It's really good. I loved it.

It seems like there are two types of people in the time travel world: those who want to go back, and those who want to go forward. Has there ever been a consensus?
I think there's a real divide. Personally, I always assumed that everybody would want to go to the future. I always wanted to go to the future. H. G. Wells sent his guy to the future, even though he was interested in history. On the contrary, I started asking people, and as far as I can tell, it's fifty-fifty. But people have definite preferences.

What would be your preference?
My own feeling changed while I was working on my book *Time Travel: A History*. Partly because I had written about the past and wouldn't it be nice to meet Isaac Newton and see if anything I had written was actually right. An actor friend of mine answered without a moment's hesitation and said she wanted to go back to watch Shakespeare with his company of players working out those plays. I thought, "Wow, that would be good." Also, doesn't it seem that our sense of the future just in the last few years has gotten darker and darker? The future is for many people less likely to be imagined as a time of excitement and marvel, and more likely to be imagined as something scary and desperate. That changes things too. You can see that in our literature, which has become completely dystopian.

In your book you write, "Time traveling while black or female poses special hazards." Who are these particular travelers?
As in every other part of our culture, diversity has been slow in arriving in the science fiction business. There have been lots of women writing about time and time travel. Of course, Virginia Woolf, of the great writers, was one of the very first, along with Marcel Proust and James Joyce around the same time, to suddenly focus on time as her principal mission. Her book *Orlando (*1928) is a gender-bending time travel masterpiece. A terrific recent time travel book that makes the point that it might be more dangerous for a black person to appear in sixteenth-century England, let's say, is Dexter Palmer's *Version Control (*2016). We're getting more diversity in our art as well as our lives, belatedly.

What would a time travel machine look like today? Could the Internet fill that role?
Yes, the Internet is our version of a time travel machine. It enables us to visualize the past, to project ourselves into the future—our images and our messages. It connects us with the past in surprisingly vivid ways, especially now that it's being mixed with augmented reality and virtual reality technologies. I think it's sort of fair to say that the Internet is our version of a time machine or a time gate. It's the closest thing we're ever going to have.

You've written that "Time travel opens our eyes." In what ways?
We could quote Virginia Woolf: "For what more terrifying revelation can there be than it is the present moment? That we survive the shock at all is only possible because the past shelters us on one side and the future on another." It goes back to your first question: Why do we need time travel? Because the present isn't enough. The present by itself is a prison. It's confining, and then it's gone. Opening these doors to the past and to the future makes us human.

James Gleick is an author and essayist who writes about science and technology and their cultural consequences. In addition to *Time Travel: A History,* he is the author of the bestselling books *Chaos: Making a New Science, Faster: The Acceleration of Just About Everything,* and *What Just Happened: A Chronicle from the Information Frontier,* among others. He was elected president of the Authors Guild in 2017.

MENTAL NOTE

Time Makes For Dramatic Effect

by David Eagleman

There are many films that illustrate the malleability of our perception of time. *Bonnie and Clyde* (1967) was the first movie to introduce slow motion in a move that changed filmmaking. In the climactic ending, Bonnie and Clyde are shot down in a hailstorm of bullets, and the director put the scene in balletic slow motion. No one had ever done this before. Some critics jumped on the director, Arthur Penn, calling it gratuitous. But as a cinematic technique it caught on. Why? Because everyone understood it. Everyone intuited that when something important happens, you experience it in a different way. You are not seeing more data in time, but you are remembering it better. When you ask yourself what happened after a dramatic event, your brain reads back out detailed memories and believes the event occurred in something like slow motion.

Photograph by Silver Screen Collection/Getty Images

RE-FIGURING THE FUTURE

WITH MOREHSHIN ALLAHYARI

BY *Anna Cahn*

Morehshin Allahyari (b. 1985, Tehran, Iran); *She Who Sees the Unknown*, 2017; courtesy of artist

In her virtual and object-based artworks, the New York–based, new media artist Morehshin Allahyari reimagines future landscapes, inventing new narratives while transcending the boundaries of gender, sex, and race. Born in Tehran, Iran, in 1985, Allahyari is also an educator, curator, and activist. She appropriates imagery from her own personal and cultural mythology and critically questions the present while contemplating the future.

I spoke with Allahyari to discuss her most recent project, *She Who Sees the Unknown* (2017–18), which examines the dark goddesses, monstrous and djinn female figures of Middle Eastern origin. She "re-figures" these mythological creatures by creating them with 3D scanners and printers. Their "dark" femme powers are appropriated to fight the effects of colonialism and other forms of contemporary oppression. The work also incorporates elements of performance in the form of ritual ceremonies in which the artist activates her army of dark goddesses and propels them into our world. Allahyari's archive of dark goddesses not only preserves, protects, and celebrates their feminine powers but also secures their relevance for future generations.

Anna Cahn: What is the "unknown" element in your work *She Who Sees the Unknown*?
Morehshin Allahyari: Djinn (Arabic for genies) have a very specific place in Islamic culture. A djinn can be evil and good at the same time, or choose to be one or the other. It can make decisions for you, it can read your future, and it can influence your future. So the unknown is this element of future reading and having an awareness of things that regular people don't. It's information only available in this other world.

What is the significance of using 3D scanning technology in your most recent work?
When I 3D scan the data it comes to life pixel by pixel. There is a certain kind of magic embedded in these technologies. I've been doing a lot of research on digital colonialism and how these very technologies are being used as tools for colonizing different cultures and histories. We are now experiencing data ownership and data colonization in ways we haven't before.

You use the terms "Digital Colonialism" and "re-Figuring Feminism." Can you explain what these terms mean to you?
Digital Colonialism is a term that hasn't really been used before; it's not just about cultural or historical heritage, it can simply be the way Google Maps works, in terms of the way information is presented or hidden, and then access to that. You can use re-figuration as a powerful way of recreating and appropriating stories, images, and figures. I am specifically interested in re-figuration as this act of going back and looking at forgotten female figures from very old mythical ancient narratives and texts, and bringing them back. Through acts of re-figuration certain acts of decolonization can happen.

FEMININE FUTURE AT THE RUBIN

The phrase "feminine future" heralds a shift from the historically dominant patriarchal worldview. It has gained speed as feminism moves toward intersectionality: the idea that the fight for women's equality depends on fighting similar injustices tied to race, religion, or gender. In 2018, the Rubin will host a performance art series featuring three artists presenting in-progress works centered on the theme of alternative futures. These artists draw attention to traditionally marginalized stories, generating new pathways toward freedom and inclusivity, and they include elements of activism and pragmatism in their practices, invoking a sense of immediacy while anticipating the possibility of a different future.

How does activism inform your practice, and how does your art inform your activism?
I don't think about activism and art as separate spaces. Growing up in Iran until I was twenty-three, politics is so embedded in your everyday life, from the choice of the clothes you wear, to the food you eat, how you should be and behave. Growing up in a place like Iran, or now being an immigrant, we perhaps never had the privilege of not making work that's not political. This is why I am an artist and why I am making art, because I want my work to challenge things, to go beyond the problems of the art world, to push things into real problems that we're dealing with, not just what is aesthetically pleasing or poetic, but works that can have practical components to them.

I have heard you say that you believe in multiple futures. What does that mean or look like to you?
There needs to be multiple futures, or plural futures, at least more than one. I think it's really problematic when we talk about the future and the future is always this image that we have that is defined for us, described by and anticipated by Silicon Valley. This whole idea of singularity and where things go in the years to come…that space is imagined by a very specific demographic, a specific group of people, and that means that a huge number of people, including people of color and the LGBTQ community, are always going to be excluded from that space. I believe that when there is a very small demographic of people imagining a future it is always going to be limited to what they know and what they think are the problems of the world. This is why I think it is really important to talk about reimaging that space and rethinking that future, but also encouraging this idea of plural singularity, plural futures. I think that is the way to invade that very image of the future—to suggest other ways and alternative futures.

Morehshin Allahyari is an Iranian artist, activist, and educator. Her modeled, 3D-printed sculptural reconstructions of ancient artifacts destroyed by ISIS, titled *Material Speculation: ISIS,* have been exhibited worldwide and received widespread curatorial and press attention. She is the recipient of the Leading Global Thinkers of 2016 Award from *Foreign Policy* magazine, and has shown her work at the Queens Museum, Tate Modern, Venice Biennale di Architettura, and Centre Pompidou, among others.

Anna Cahn is a curatorial assistant at the Rubin Museum of Art. She is the lead organizer of a performance series at the Rubin in which three artists will present in-progress works centered around alternative futures. She received her BA from Clark University and an MA in art history with a concentration in museum studies from the City College of New York. She was awarded a summer residency as a research fellow at Stanford University in 2014.

THE 3 TIMES

AS A RELIGION THAT speaks of lifetimes that extend back into the immeasurable past and a path to enlightenment that unfolds for eons into the future, Buddhism has much to say about time or, in the parlance of Buddhism, the three times: past, present, and future.

To the consternation of the Buddha's interlocutors and generations of undergraduates, the Buddha refused to say whether time has a beginning. He said it was one of the "questions that tend not toward edification," in the memorable phrasing of a Victorian translator. Yet it is clear from articulations of Buddhist cosmology that, although individual worlds come into and go out of existence—through four phases called vacuity, creation, abiding, and destruction—there is no beginning to the cycle of rebirth. This doctrine has many implications, including that all sentient beings have been in every possible relationship to all other sentient beings. It is with this in mind that Tibetan lamas use the phrase *ma sems can,* "sentient beings, our mothers."

The Buddha also declined to answer the question of whether the cycle of rebirth will ever end. Later

How the past, present, and future coexist in Buddhism

BY *Donald S. Lopez, Jr.*

Buddhist thinkers say that the cycle of rebirth itself will never end; its limitless population is decreased by one each time someone follows the Buddhist path to nirvana. Buddhists therefore tend to regard the future with fear, knowing they have accumulated the causes of infinite lifetimes in the future, lifetimes that might be spent as an animal or insect, as a ghost, or as a denizen of one of the many hot and cold hells, where lifetimes are measured in millions of years. Much Buddhist practice over the past two-and-a-half millennia has been devoted to the good deeds that produce merit, the good karma, to attain rebirth as a prosperous human or as one of the gods who populate the many Buddhist heavens.

Buddhists have another reason to regard the future with dread. Buddhist theories of time explain that the length of the human lifespan rises and falls in cycles; as the lifespan wanes, life becomes worse, with times of pestilence, chaos, and war. Buddhas appear in the world on the downward slope of the curve; our Buddha appeared in the world when the human lifespan had declined from eighty-four thousand years to one hundred years. The future is therefore marked by an inexorably growing gap in the time since the advent of the Buddha, making it harder and harder to follow his teachings and traverse the path to enlightenment.

Indeed, the future is said to be marked by degenerations in five areas: lifespan, philosophical views, negative emotions, sentient beings, and the environment. It will become more difficult for monks and nuns to keep their vows; the yellows robes of the monk will slowly fade until they become the white robes of the laity. Exactly how long this process will take is the subject of much speculation and prophecy. In one text, the Buddha predicts that his teachings will only last for five hundred years. He says that had he not ordained women they would have lasted for a thousand years.

In the Pali tradition of Sri Lanka and Southeast Asia, it is said that the teachings will last for five thousand years, disappearing in five stages, each lasting a millennium. In sequence, we will see the disappearance of enlightenment, the observance of monastic vows, knowledge of the texts, the outward signs of monasticism, and the relics of the Buddha. In Japan, Buddhist monastics calculated that the degenerate age began in 1052, causing such famous masters as Honen to declare that seeking enlightenment through one's own efforts is futile, and that we must rely on Amitabha, the Buddha of Infinite Light, to take us to his pure land.

Many Buddhist traditions predict that the last thing to disappear will be the Buddhist relics. In one of the more dramatic scenes in Buddhist literature, the relics break free from the stupas, pagodas, and chortens around the world that have held them for centuries, reassembling under the Bodhi Tree, where the Buddha achieved enlightenment, to be worshipped by the gods one last time before bursting into flames.

Yet Buddhists also have reason to regard the future with hope and anticipation. In some sutras, the Buddha—who is said to have complete knowledge of the past, present, and future—predicts that all sentient beings will one day become buddhas themselves. In a sense, even the gradual loss of the dharma after his death is a reason for hope, as the disappearance of his dharma is necessary for the most important of all future events to occur: the coming of the next buddha, Maitreya.

Buddhists believe that there have been many buddhas in the past and there will be many buddhas in the future. There is no reason, however, for a new buddha to appear in the world while the teachings of the previous buddha remain. Thus, the next buddha will descend from the Joyous Heaven into our world only when the teachings of the previous buddha have been forgotten and the relics of the previous buddha have burst into flame. Yet the existence of the next buddha is certain; we even know his name. Over the centuries, many have engaged in all manner of practices—from prayers to longevity techniques—so they might be present in our world when Maitreya preaches the dharma.

Buddhism is known for its remarkable ability to ponder the nature of reality at both the cosmic and molecular level. At the molecular level, we find a very different view of the future. It is here that we see another version of the three times, where every moment of mind and matter passes through three phases: production, abiding, and disintegration. Birth, life, and death. Buddhist thinkers have pondered these phases with great profundity, seeing birth, life, and death occurring each moment, rather than each lifetime, and noting that because the past is no longer present and the future is yet to come, all that exists is the present moment.

Yet if the existence of the present depends on the past, and the existence of the future depends on the present, then the three must have some connection to one another in time. Indeed, the present and past would have to exist at the same time. As Nagarjuna states, "If the present and the future exist in dependence on the past, the present and future would exist in the past." In other words, when you look to the future, it can't be found.

Donald S. Lopez, Jr. is the Arthur E. Link Distinguished University Professor of Buddhist and Tibetan Studies at the University of Michigan. His recent books include *Hyecho's Journey: The World of Buddhism*, *Gendun Chopel: Tibet's Modern Visionary,* and *The Passion Book: A Tibetan Guide to Love and Sex,* with Thupten Jinpa.

Read about the Zen Buddhist perspective on time from Greg Snyder at RubinMuseum.org/Spiral.

Matti Braun (b. 1968, Berlin); *S.R.*, 2003–2005; foil, water, tree discs; exhibition view: Gost Log, Arnolfini, Bristol, 2012; courtesy of the artist and Esther Schipper, Berlin; photo © Jamie Woodley

CLOSE ENCOUNTERS OF THE BENGALI KIND

Was the screenplay for Indian filmmaker Satyajit Ray's unrealized motion picture, *The Alien*, about a kind extraterrestrial who visits India, appropriated years later for the blockbuster *E.T.?*

BY *Howard Kaplan*

A SPACESHIP SPLASHES down in the middle of a lotus pond in rural Bengal. A latch opens and out comes a rather kind creature, whose first human friend is a young village boy. The alien's friendliness is anathema to the genre: people from outer space are supposed to be evil and wreak havoc on earthlings. Not this fellow. He's friendly, playful, and a bit mischievous. You may be scratching your head at the moment thinking, this storyline sounds familiar. Well, aside from the location, it may.

The Alien is based on Satyajit Ray's short story "Bankubabur Bandhu" (Mr. Banku's Friend), written in 1962 and published in *Sandesh*, the Bengali children's magazine founded by Ray's grandfather Upendrakishore Ray Chowdhury in 1913. While in London in 1966, Ray met with sci-fi great Arthur C. Clarke on the set of *2001: A Space Odyssey.* They had been corresponding for a few years, as Ray had asked Clarke his opinion on starting a science fiction club in Calcutta. He also told Clarke that he wanted to make a sci-fi film, and he shared his idea for a screenplay about the kind, playful extraterrestrial. Though best known as the most important Indian filmmaker of the last century, Ray also wrote science fiction stories. His first appeared in 1961, titled "Byomjatir Diary" (Diary of a Space Traveller).

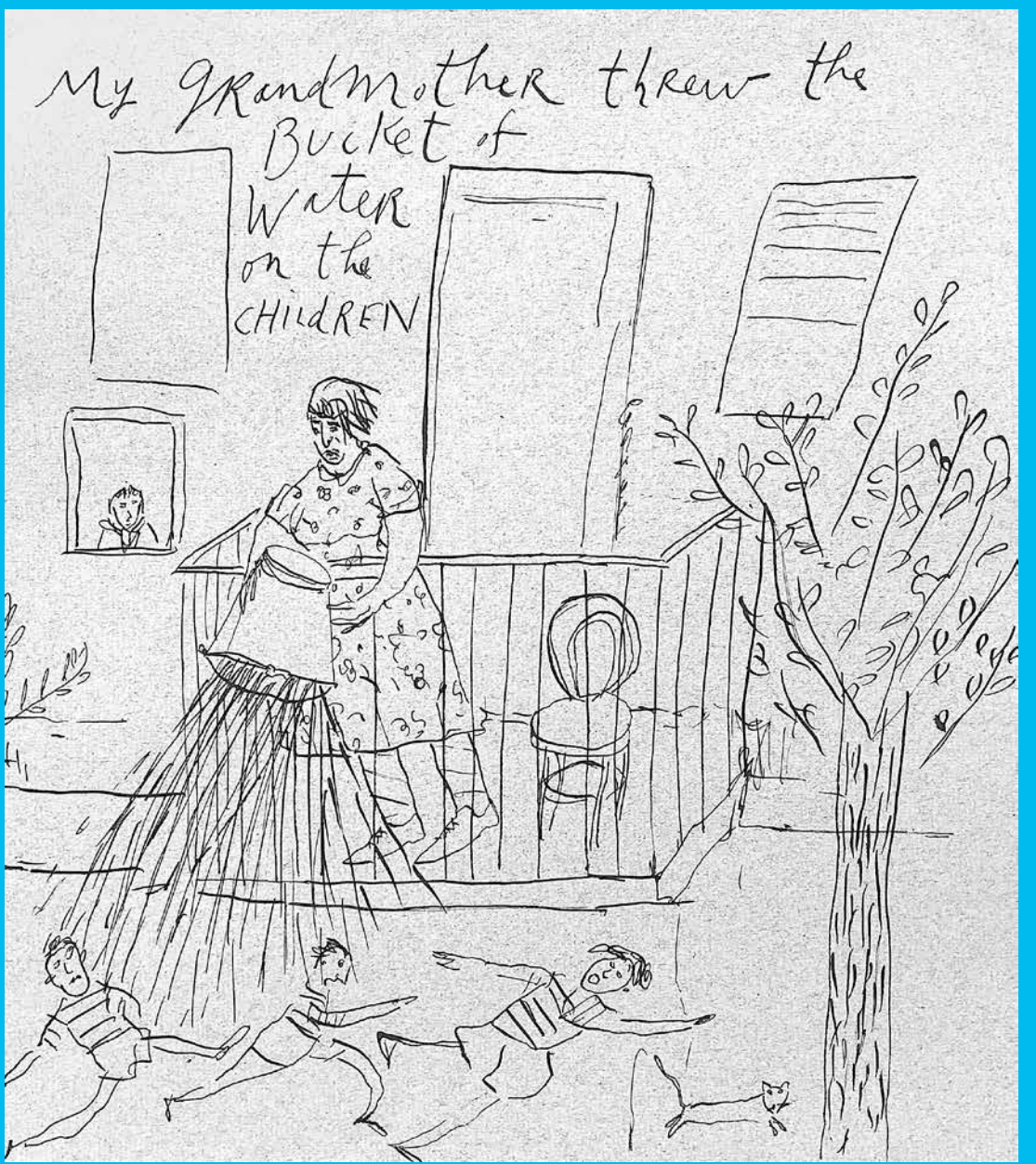
After the screenplay for *The Alien* was completed, it was circulated among Hollywood studios, along with drawings Ray drafted of Mr. Banku and his friend. Columbia Pictures became interested in the script, and Ray traveled to Los Angeles in 1967 to sign a deal. Casting began. The English actor Peter Sellers signed on to play the role of an Indian businessman. Marlon Brando also had a role, but then dropped out. Later that year, Ray and his associates scouted locations in the Bankhura and Birbum districts of West Bengal. But for various reasons, the project fell through, and Ray returned to Calcutta, disillusioned. The film was never made.

In 1982, Steven Spielberg released *E.T. the Extra-Terrestrial.* The similarities between this movie and *The Alien* did not escape Ray, who told the Indian press at the time that *E.T.* "would not have been possible without my script of *The Alien* being available throughout America in mimeographed copies." Spielberg denied the allegations, but to this day, not everybody is convinced. The story of the making—if not the unmaking—of *The Alien* is one of cinema's mysteries of the latter part of the twentieth century. Did he or didn't he? Film critics and fans still wonder if Spielberg co-opted the earlier script, while contemporary artists who explore cross-cultural narratives and speculative futures, including Matti Braun and the Otolith Group, contemplate the significance of the "lost" Ray film.

See Matti Braun and the Otolith Group in the Rubin Museum's exhibition *A Lost Future*.

Howard Kaplan is the former editor in chief of *Asiatica,* the annual magazine of the Freer and Sackler Galleries, Smithsonian Institution. For his writing he has received fellowships from the MacDowell Colony, the Bread Loaf Writers' Conference, and the Edward Albee Foundation among others. He currently divides his time between New York and Washington, DC.

MY GRAND CHAN



A meditation on what is passed down to future generations

BY *Maira Kalman*

MOTHER

My grandmother was not chatty.

By not chatty, I mean she never spoke.

She was quite beautiful in photos when she was young.

But then her legs swelled up and they were as big as tree trunks.

And she always looked sweaty. Haggard. Weary. Beleaguered.

Constantly cleaning or washing or ironing or cooking. So much cooking.

She would wipe the hair away from her brow with hands thick from work.

If she smiled it was pained. As if she was ashamed of smiling.

She was kind to me.

She bought me treats. My favorite soda. My favorite ice cream.

She baked every Friday.

Cinnamon rolls. And babka.

Actually she was not always kind.

When the neighborhood children drove her nuts with their noise downstairs,

she would stand on the terrace and throw a bucket of water on them.

Really?

A

Or maybe it was the cats she was trying to chase away. There were so many cats in Tel Aviv.

My grandmother was an orphan from Belarus.

She fell in love with a dashing man in the village.

But she was deemed not good enough for him, and was offered his brother.

My grandfather.

They left Belarus and came to Palestine.

Did they ever speak? Impossible to say.

They had four children.

My mother Sara being one of them.

My grandfather loved to eat potatoes. He burnt them in a pot.

My grandmother scolded him.

Well that's talking.

In my family, not talking was our way of talking.

It was dangerous to talk.

If you uttered something mean, it could never be taken back.

If you boasted, you were tempting the evil eye.

Better not to talk.

Of course there were people who spoke in the family.

But it is not part of my memory. I am left with a sense of silence.

And in that way, we were all left to our own devices.

By devices, I mean mistakes. And by mistakes, I mean life.

And in general, I think that is a fine way to live. Not to know and not to be told anything and just to figure it out. From books. Or other people. Or instinct.

Was my grandmother happy or sad?

Contented or disappointed?

A prisoner of a patriarchy?

If she could have told the story of her life, what would she have said?

Now I really wish I could hear that.

But it might complicate things.

This is what I know.

You have your work to do.

You have your family.

And that is the whole story.

Maira Kalman is a writer, illustrator, and designer, who has published over twenty-five books for adults and children, including an illustrated edition of Strunk and White's *The Elements of Style.* She is a contributor to the *New Yorker,* and her online illustrated columns for the *New York Times,* The Principles of Uncertainty and And the Pursuit of Happiness, were compiled into books by Penguin Press. Kalman's most recent book, *Beloved Dog,* is now out in paperback. She is the owner of a pair of Toscanini's pants and is represented by the Julie Saul Gallery.

THE ALTRUISM REVOLUTION

Advice from the women in his family helped Matthieu Ricard seek out a life of wisdom and compassion.

BY *Matthieu Ricard*

WHEN I WAS YOUNG, my grandmother and mother often told me that kindness is the most admirable quality a human can possess. My mother demonstrated kindness constantly through her actions. Many other people I respected also urged me to be kindhearted. Their words and actions were a source of inspiration; they opened a field of possibilities beyond self-centered preoccupations and increased my wish to live a good, meaningful life. My spiritual masters emphasized the same approach. Since 1989, I have had the honor of serving as a French interpreter for His Holiness the Dalai Lama, who often states, "My religion is kindness."

Over the years, I became increasingly passionate about researching altruism and compassion. I came to realize that altruism is neither a utopian ideal nor a luxury that we can afford only under the best circumstances. Rather, altruism is the only concept that harmoniously connects the economic challenges of the short term, our quality of life in the mean term, and the future environment in the long term. Selfishness will not do the job.

To foster altruism, we must first recognize the banality of goodness—the idea that most of the time, most of the seven billion human beings on our planet behave decently toward one another. Let us therefore assume that, besides a few maniacs and lunatics, some of whom might even wield temporary power, we all want a better world.

In many respects, the world is faring better. Thanks to the United Nations Millennium Development Goals, the number of people who live below the poverty line has dropped from 1.5 billion to 750 million in twenty years. If we don't ruin the environment, extreme poverty could even disappear by 2030. The number of countries that have abolished the death penalty has multiplied by thirteen; the number of children with no schooling has been reduced by half over two

Matthieu Ricard and his mother, Yahne Le Toumelin

decades; and the number of authoritarian regimes has diminished from ninety in 1975 to twenty today. The mortality rate of malaria has decreased by sixty percent in fifteen years, saving more than six million lives, thanks in part to the exceptional work of Ray Chambers, the United Nations' special envoy for Health in Agenda 2030 and for Malaria.

Despite these improvements, environmental degradation is undoubtedly the major challenge of the twenty-first century and will have a great impact on the fate of future generations. This is no time to lose courage. We must act on an *individual* level by engaging ourselves with perseverance in the service of humanity and the planet. On a *social* level, we must address inequalities by fostering altruistic cooperation. At the level of national and international *institutions*, we must ratify binding environmental resolutions.

For a better future, we must dare to embrace altruism. Dare to say that real altruism exists, that every one of us can cultivate it, and that the evolution of cultures can favor its expansion. We must dare to teach altruism in schools as a precious tool that enables children to realize their natural potential for kindness and cooperation. Dare to assert that the economy cannot content itself with the voice of rationality and strict personal interest—it must also listen to the voice of caring and make it heard. We must dare to take the fate of future generations seriously, changing the way we exploit our planet today, as it will be their home tomorrow. Finally, we must dare to proclaim that altruism is not a luxury but a necessity.

As the environment approaches a dangerous point of no return, we still have the power to overcome these challenges by fully engaging our extraordinary ability to cooperate with each other and investing our energy into solutions that will improve the state of the world. As the philosopher and mathematician Bertrand Russell once said, "The only thing that will redeem mankind is cooperation." In any case, it is now too late to be pessimistic. With their emphasis on kindness, my grandmother and mother were right indeed.

Altruism is neither a utopian ideal nor a luxury that we can afford only under the best circumstances.

Matthieu Ricard is a Buddhist monk, author, translator, and photographer. After completing a PhD in cell genetics in 1972, he moved to the Himalayan region where he has lived ever since. He is the author a number of bestselling books including *Beyond the Self: Conversations between Buddhism and Neuroscience* and *Altruism: The Power of Compassion to Change Yourself and the World.* Ricard is engaged in the exploration of the intersection between contemplative traditions and scientific inquiry.

MENTAL NOTE

How to Live a Full, "Long" Life

by David Eagleman

OLD AGE GOES FAST.

We tend to think about the brain's memory the same way we think about a computer's memory, which captures everything. But the human brain is more like a sieve; only a small fraction of our daily events make it into memory. You don't remember most of your life—you remember key frame moments. The amount of footage of memory that you have from an event determines how long you think it lasted, which is why time seems to speed up as you get older. Remember when you were at the end of a childhood summer and looked back? There were so many novel things that your brain remembered. So many events that were totally new to you. When you looked back on the summer, you thought it lasted a long time. But as an adult you look back at the summer and think, "Where did it all go?" Why? You have already figured out most of the rules of the world, so your brain doesn't bother to write much down. In retrospect, events like the summer appear to pass more rapidly.

HOW DO YOU LIVE LONGER?

If you want to extend how long something seems to have lasted, the key is to seek novelty. I'm not telling you how to live longer, but how to make it seem as though you've lived longer. Seek out new things that jar your brain off the path of least resistance. Your brain will be forced to write memories down and incorporate new things into its model of the world. There are many easy ways to get off the path. If you wear a watch or a Fitbit, switch it to the other wrist. Brush your teeth with your other hand. Rearrange your office. Take a new route home from work every day. These simple things knock you off the path of automization, so in retrospect you think, "Wow! That month, that summer, that year lasted a long time."

HOW CAN SOCIETY BE ENRICHED BY THESE FINDINGS?

I am on the board of the Long Now Foundation, which thinks about time on a ten–thousand–year scale. It is easy for us to get caught up in our day-to-day tasks and local political cycles. But we must ask, now that we are a sufficiently advanced species, how do we think about things on a very long timescale? This exercise is rarely performed. When you think about erecting a building, do you think about how to build it to last ten thousand years? Or when you build a clock, which the Long Now Foundation is doing, do you question how to make it last for that time span? The Long Now Clock will have one chiming sound mark every one hundred years and a different chime mark every one thousand years. Just think of the possibilities if we built machinery—or our political or societal structures for that matter—with such timescales in mind.

I'm hopeful because blades of grass grow through cracks in a sidewalk. • I'm anxious because we choose not to recognize each other's humanity. • I'm hopeful because I'm feeling more teachable! • I'm anxious because I forget to trust. • I'm hopeful because I feel I have more insight and control over my life. • I'm anxious because too many people don't listen to others, especially if they disagree.• I'm hopeful because young people are exposed to more and more sensitive discussions on treating women ethically and nonviolently. • I'm anxious because I see such a high level of tension and distance between people of differing opinions. • I'm hopeful because there's always something around the corner that could be wonderful. • I'm anxious because my husband's health is deteriorating and I'm carrying too much responsibility. • I'm hopeful because there's always a new beginning. • I'm anxious because I'm starting a new period in my life, work, love, living. It's all so new.• I'm hopeful because I enjoy following along with life's surprises. It will all be new. • I'm anxious because the threat to the environment becomes more real every day. • I'm hopeful because there are a lot of people waking up and becoming more loving. • I'm anxious because the world is changing, with daily traumas and hateful intentions. Where do I fit? How can I get any peace of mind? • I'm hopeful because we are all united through a primal humanity. • I'm anxious because there are many things I can't predict or control about the state of our country and how it will affect my family and friends.• I'm hopeful because I am; as long as I breathe... • I'm anxious because of kindergarten. • I'm hopeful because so many of the young people I know are striving for justice and equality for all. • I'm anxious because there is too much pain and suffering. • I'm hopeful because more people are engaged in the political process than ever before. • I'm anxious because I don't know what's next. • I'm hopeful because life is full of new opportunity every day! • I'm anxious because life is hard sometimes. • I'm hopeful because I have good relationships with family and friends. • I'm anxious because I have a lot of stude … ecause I feel trapped at my job. • I'm hopeful because everything is temp … ere are opportunities. • I'm anxious because of the state of our country. … r president sucks. • I'm hopeful because I have a wonderful family. • I'm … r change. • I'm anxious because my physical body is so fragile. • I'm hop … e I'm good enough.• I'm hopeful because that's my faith—always positi … g the problem allows movement towards the solution. • I'm anxious be … o grow increasingly educated, compassionate, and progressive. • I'm … b interview tomorrow. • I'm anxious because my boyfriend left me after … ecause crazies rule the world at the moment. • I'm hopeful because the … ntrol the things I love. • I'm hopeful because there is good in this world. … use there is possible change in the future. • I'm anxious because college … because midterms are approaching. • I'm hopeful because of the human … opeful because my physical body is capable of so much. • I'm anxious b … s because I'm hungry. • I'm hopeful because on the local level everythin … l because of Thea. • I'm anxious because I ran out of Xanax. • I'm hopef … don't look up anymore. • I'm hopeful because I'm realizing it's okay to mak … st our leaders. • I'm hopeful because I have goals. • I'm anxious because … cause I have a bright future ahead of me. • I'm anxious because I want to l … use it feels like we are past the point of saving this planet :(• I'm hopeful … to myself sometimes. • I'm hopeful because love overcomes all! • I'm a … mily. • I'm anxious because nothing is permanent. • I'm hopeful because … ve in myself and know I can achieve my dreams. • I'm anxious because t … ing of others. • I'm anxious because there's no time to stop—I have to mo … I'm anxious because I fear that I will never reach my full potential. • I'm I … ecause of global tensions, a broken healthcare system, climate change, g … cause I'm embarking on a new chapter—adulthood. *eek!* • I'm hopefu … n't want to disappoint myself. • I'm hopeful because my two adorable flu … what makes me happy. • I'm hopeful because the sun rises every morning. • I'm anxious because of the rat race mentality. • I'm hopeful because places like this exist in the world. • I'm anxious because I feel like I have a long way to go. • I'm hopeful because I feel God's presence. • I'm anxious because I might not get what I want.• I'm hopeful because Enrico's in the world. • I'm anxious because college is $$$• I'm hopeful because life will work itself out! • I'm anxious because I need to figure out where my LIFE is going!• I'm hopeful because all is well <3 • I'm anxious because I want my daughter to be in less physical pain.• I'm hopeful because too many people make me SMILE :) • I'm anxious because I can't control EVERYTHING. • I'm hopeful because I'm learning to let go. • I'm anxious because of first gen immigrant pressure. • I'm hopeful because the future is full of opportunities and possibilities. • I'm anxious because people only seem willing to change when something bad happens to them. • I'm hopeful because art heals people. • I'm anxious because I have no idea what I'm doing. Ever. • I'm hopeful because there is so much good in the world—we have to look for it! :) • I'm anxious because nothing is original. • I'm hopeful because the days are getting longer. • I'm anxious because of my two kids. • I'm hopeful because I must be. • I'm anxious because I work for a nonprofit whose public funding is at risk of being taken• I'm hopeful because I believe in myself. • I'm anxious because not enough girls in the world are getting an education. • I'm hopeful because I am in love <3 • I'm anxious because we seem to have confused domination for strength.• I'm hopeful because I have so much love in my life. • I'm anxious because I created another life. • I'm hopeful because kids could learn to open consciousness. • I'm anxious because of cancer. • I'm hopeful because I've accepted that it's OK that I don't know what the h*ll I'm doing with my life! • I'm anxious because I keep putting off physical exercise. • I'm hopeful because I'm learning to love myself! <3 <3 • I'm anxious because I haven't committed to who I really am... • I'm hopeful because I get to explore and make things with the person I love. • I'm anxious because I don't know how to help my friend.• I'm hopeful because kindness is contagious. • I'm anxious because I'm uncertain about future success.• I'm hopeful because my family is healthy. • I'm anxious because I don't know what's happening with my body. • I'm hopeful because God gives me hope (Alhamdulillah). • I'm anxious because I think too much.• I'm hopeful because I have a bake sale on Wednesday!! :) • I'm anxious because new beginnings. • I'm hopeful because the arc of the moral universe bends towards justice.

IS YOUR HOPE MY ANXIETY?

HOW DOES OUR relationship with the present color our sense of the future? Inspired by the collective spirit of Tibetan prayer flags, artist Candy Chang and writer James A. Reeves invite Rubin Museum visitors to engage with their community by sharing their anxieties or hopes on the Museum's ground floor Spiral Wall over the course of 2018. Collectively titled *A Monument for the Anxious and Hopeful*, these responses create a dialogue between participants and reflect a living catalogue of the ways in which we relate to the uncertainty of tomorrow.

Read more about the project at RubinMuseum.org/Spiral.

Candy Chang is a social practice artist who creates public spaces for people to transform their individual thoughts into a collective experience. Her project *Before I Die* has generated three thousand walls in seventy countries since 2011. Writer and designer **James A. Reeves** is a professor of philosophy and art history at Parsons School of Design and Pratt Institute. **Jane Hsu** coordinated the project at the Rubin Museum of Art, where she is the head of interpretation and engagement.

The Future: A Yearlong Exploration

Step into a world where past, present, and future exist all at once. At the Rubin in 2018, we're bringing together a full year of exhibitions, talks, programs, and experiences that reexamine our commonly held ideas about the future. By exploring various perspectives—from an eighth-century Buddhist master to Einstein to contemporary artists—we invite you to consider a future that isn't fixed but fluid. Are you ready to form a new relationship with the future? Take a look at what's happening, and join us this year at the Rubin.

About the Museum

The Rubin Museum of Art

WHERE CONTEMPORARY MINDS MEET THE ART AND WISDOM OF THE HIMALAYAS

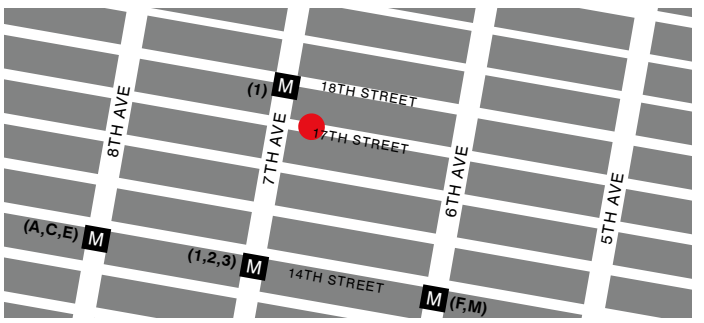
The Rubin Museum of Art is a space for mindful cultural exchange, where you'll experience how art and ideas from the Himalayas intersect with our contemporary lives. Boundaries dissolve as we traverse art forms, time, cultures, and geography to incite your curiosity and spark new ways of seeing the world. Thought-provoking exhibitions, immersive events, talks, films, concerts, and community gatherings make the Rubin a destination for discovery. Explore infinite inner and outer worlds and the ways we are all connected at our vibrant space in New York City's Chelsea neighborhood.

MUSEUM HOURS

Monday 11:00 AM–5:00 PM
Tuesday CLOSED
Wednesday 11:00 AM–9:00 PM
Thursday 11:00 AM–5:00 PM
Friday 11:00 AM–10:00 PM
Saturday 11:00 AM–6:00 PM
Sunday 11:00 AM–6:00 PM

VISIT

The Rubin Museum of Art | 150 West 17th Street | New York, NY



CONNECT WITH US

Explore the collection, peek behind the scenes on our blog, and receive the latest updates on our exhibitions and current program listings!

- Visit us online at RubinMuseum.org
- Join our email list at RubinMuseum.org/news
- Follow us on social media @RubinMuseum

#TheFutureIsFluid

- Download the free Rubin app and access many works from our collection in the palm of your hand.

Exhibitions

Through the lens of Himalayan art, we journey with all who are curious to explore our shared human experience and consciously and insightfully navigate the complexities of our world today.

Gateway to Himalayan Art
Start here for an introduction to the rich artistic traditions of the region, illuminating the primary figures, symbols, materials, and techniques presented throughout the Museum.

Masterworks of Himalayan Art
Journey across geography and more than a thousand years of history, tracing artistically and historically significant works from the Rubin's collection, as well as new acquisitions and gifts.

Chitra Ganesh: The Scorpion Gesture and Face of the Future
(February 2, 2018–January 7, 2019, and February 2, 2018–November 4, 2018)
Artist Chitra Ganesh reimagines the permanent collection galleries and the visual languages of sci-fi and fantasy. Activate site-specific video animations that reflect and respond to images and stories of the Second Buddha (Padmasambhava) and the Future Buddha (Maitreya). In addition to showcasing her own work, Ganesh has invited seven emerging artists to expand and redefine the aesthetics of science fiction by creating posters displayed in our theater level Art Lounge.

Sacred Spaces: The Road To... featuring the Tibetan Buddhist Shrine Room
(November 17, 2017–October 15, 2018)
What journeys are sacred to you? Sculptures by Ghiora Aharoni and mesmerizing videos by Jawshing Arthur Liou challenge you to consider the sacred in your own life. Engage all your senses in the Shrine Room with flickering butter lamps, incense, and an installation of more than 150 objects.

A Lost Future: Shezad Dawood, The Otolith Group, Matti Braun
(February 23, 2018–January 28, 2019)
Transport yourself to immersive, virtual, and imagined worlds as award-winning contemporary artists dissect layers of time in this exhibition trilogy.

Put on a headset to visit Kalimpong by way of virtual reality, as artist Shezad Dawood links a haunting nostalgic portal to a future alternative reality, accessing multiple places and times (February 23, 2018–May 21, 2018).

Watch films created by the Otolith Group that challenge scenarios of linear time and explore India's history, science fiction, and potential futures (June 1, 2018–September 17, 2018).

Walk across Matti Braun's otherworldly immersive lake, which summons a 1960s-era notion of the future by evoking Satyajit Ray's unrealized science fiction film that is said to have inspired *E.T.* (October 5, 2018–January 28, 2019).

The Second Buddha: Master of Time
(February 2, 2018–January 7, 2019)
Find hidden content in the galleries and use augmented reality to reveal the stories and legacy of eighth-century Buddhist master Padmasambhava, known as the Second Buddha. He is believed to have traversed time, concealing treasure teachings for future discovery.

Public tours are offered daily and are free with admission.

Chitra Ganesh (b. 1975, Brooklyn, NY); *Feet in Flames*, 2018; mixed media on paper; 60 x 40 in.; courtesy of the artist

Programs & Experiences

As a space for mindful, cultural exchange, the Rubin is driven by the desire to challenge, surprise, and provoke—we want to bring you into the fold to expand the limits of what an art museum can be.

The Rubin presents on-stage conversations, workshops, live musical performances, film screenings, and other innovative public events to expand on the themes in the galleries. For current listings, visit RubinMuseum.org.

Photograph by Asya Danilova

PARTICIPATORY EXPERIENCES

Your Hopes, Your Anxieties
Candy Chang's interactive installation *A Monument for the Anxious and Hopeful* welcomes you in the Museum lobby. Share your anxieties and hopes for the future on an outsized message board. Over the year, the wall will shift and change, acting as a visual barometer of a shared state of mind.

Letter to A Future Visitor
What if you could transmit your museum experience through time? On your visit, you'll receive a letter with cues and clues, written by a past visitor. Write your own letter to shape a future guest's experience.

Dream-Over
Sleep beneath a work of art chosen just for you and see what your dreams have to say about the future. Dreams are not only tools for transmitting visions but are associated with prophetic meaning in many cultures.

All programs subject to change.

MUSIC & PERFORMANCE

Spiral Music
Wander the galleries as live music emanates from the base of the Museum's spiral staircase. Each Wednesday evening, hear from rotating artists who specialize in music from the Himalayas and South Asia.

Naked Soul
Hear performances from some of the country's top singer/songwriters without microphones or amplifiers, as if the music were, acoustically speaking, naked. The musicians in the series draw on the universal themes inherent in Himalayan art—spirituality, peace, tolerance, wisdom, compassion—on select Friday evenings.

Rhythms of India
Performers explore the varied traditions of Indian music, from timeless ragas to contemporary fusion.

Face of the Future
In this performance art series, three artists present works in progress that confront different aspects of femininity, with each artist envisioning the possibility of a more diverse, inclusive future.

TALKS

Brainwave
Our longest running series is all about understanding the mind and what makes us who we are. This talk series brings together neuroscientists and notable personalities for engaging conversations and presents related films and workshops.

Karma: The Original Instructions
How can we maintain and sustain life on earth? Director for the Center for Earth Ethics Karenna Gore draws on ideas from world cultures, bringing together a diverse set of voices for this series of on-stage conversations and experiences.

FILMS

Cabaret Cinema
These Friday night screenings of classic films from around the world explore themes featured in the Museum's galleries. Each screening is introduced by a special guest. Check listings for special screenings, including premieres and art house films that are rarely shown elsewhere.

BREATHE: CONNECT MIND & BODY

Explore the connections between the wisdom traditions expressed in Himalayan art and contemporary mind/body practices in a variety of programs and workshops.

WEDNESDAYS, 1:00 PM
Mindfulness Meditation
Beginners, dabblers, and skilled meditators can join expert teachers weekly to practice the art of attention. Each session is inspired by a different work of art from the Rubin Museum's collection. A free podcast of each program is also available online.

FAMILY PROGRAMS

Family Sundays
The Rubin welcomes visitors of all ages! Families can drop in to the Museum on Sundays between 1:00 to 4:00 p.m. for casual art making and free family-friendly activities. Designed for children ages three and up with accompanying adults, the art activities change monthly and connect with the art and ideas of the Himalayas.

More Than a Museum

We mix arts and culture with a social experience. In addition to six galleries, visit the café and shop, or make the Rubin the lively venue for your next private event.

CAFÉ SERAI

Enjoy the aromas and flavors of the Himalayas at Café Serai, an inviting spot for your next meal. The café is open to anyone during Museum hours and does not require an admission ticket.

EVENING HOURS

Acoustic Wednesday Evenings
Museum Open Late, 6:00–9:00 PM
Peruse the galleries accompanied by the sounds of Spiral Music. Café Serai offers a Himalayan Happy Hour with special discounts on drinks, shared plates, and more.

K2 Friday Nights
Free Museum Admission, 6:00–10:00 PM
During K2 Friday Nights, Café Serai becomes the K2 Lounge, offering a special pan-Asian tapas menu to accompany the evening's DJ and programs. Happy hour runs from 6:00 to 7:00 p.m. with a two-for-one special on beer, wine, and well drinks.

THE SHOP

Take a memory of the Museum home with you, or give a gift from the Rubin! The shop's selection of jewelry, artisan items, books, and other treasures features an array of unique items, many unavailable anywhere else. All proceeds from the shop support the Rubin Museum of Art, and items can be purchased in store or online at RubinMuseum.org. Members receive a 10% discount on all purchases.

SPACE RENTALS AND CORPORATE RETREATS

If you're planning an event or need to make a professional conference more inspiring, don't forget the Rubin is available for corporate entertaining and private rentals. It's a memorable place for guests, and we make it easy to plan—with a range of wellness experiences, educational tours, and catering menus available.

You Make It Possible

Like all nonprofit arts organizations, the Rubin Museum is only as strong as its supporters. You help us create a space for contemplation, learning, inspiration, community, and art. Join us! Visit RubinMuseum.org/support to learn more.

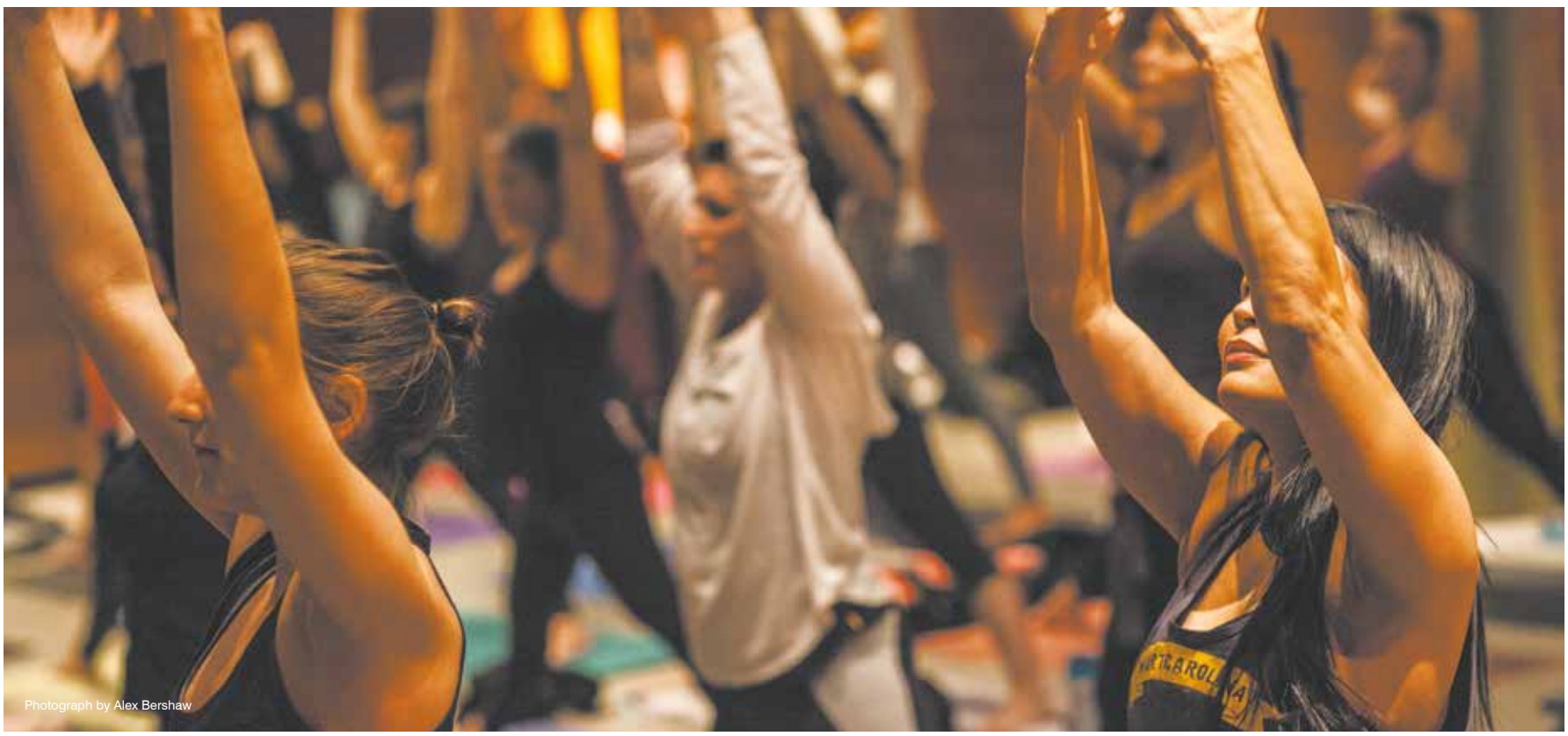
Become a member or give the gift of membership
Members get more! Benefits include invitations to exclusive previews and tours, free admission to Mindfulness Meditation and Cabaret Cinema, unlimited entry to the galleries, and much more. Membership to the Rubin Museum of Art is also a special gift that friends and family of all ages can enjoy throughout the year.

Make a donation
Your support helps make art and timeless wisdom come alive for thousands of people each year, bringing inspiration and meaning into our visitors' lives.

Volunteer or become a docent
See the inner workings of the Museum and contribute your valuable time and service. Docents connect new visitors with our art and programs as they present thematic tours, gallery talks, and other educational initiatives. Apply to be a volunteer or docent online.

Thank you to our distribution partners!

Organizations in New York City and beyond help make *Spiral* possible. Find the full list of our partners, as well as exclusive content and distribution locations, at RubinMuseum.org/Spiral.



Photograph by Alex Bershaw

Visit RubinMuseum.org/Spiral for exclusive online-only content, including:
An interview with the astronaut Tony Antonelli about how he experiences time in outer space. • An exploration of the Zen Buddhist perspective on time from Greg Snyder. • Author Amal El-Mohtar's poetic ruminations on time. • Expanded interviews from Aria Drolma and Felix "Phill" Rosado.

Photograph by Asya Danilova

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The Future

A YEARLONG EXPLORATION AND A MAGAZINE TO GUIDE YOU

Step into a world where past, present, and future exist all at once. At the Rubin in 2018, we're bringing together a full year of exhibitions, talks, programs, and experiences that examine our commonly held ideas about the future. By exploring various perspectives—from an eighth-century Buddhist master to Einstein to contemporary artists—we invite you to consider a future that isn't fixed but fluid. Are you ready to form a new relationship with the future? Take a look at what's happening, and join us this year at the Rubin.

#TheFutureIsFluid

RubinMuseum.org

Visit **RubinMuseum.org/news** to stay up to date with exhibitions, programming, and more.